HLAB: learning the BiLSTM features from the ProtBert-encoded proteins for the class I HLA binding peptide prediction

Yaqi Zhang[1], Gancheng Zhu[1], Kewei Li[1], Fei Li[1], Lan Huang[1], Meiyu Duan[1,#], Fengfeng Zhou[1,#].

1 College of Computer Science and Technology, and Key Laboratory of Symbolic Computation and Knowledge Engineering of Ministry of Education, Jilin University, Changchun, Jilin 130012, P.R. China.

Correspondence to Fengfeng Zhou: FengfengZhou@gmail.com . Phone: +86-431-8516-6024. Fax: +86-431-8516-6024. Correspondence may also be addressed to Meiyu Duan, dmy235813@163.com.

Running title: ProtBert-BiLSTM features to predict HLA-I peptides

Detailed summary of the dataset

The peptide sequences binding with the class I HLA alleles were retrieved from the study Anthem [1]. These HLA-I binding peptides were collected from the three data resources. Firstly, the known HLA-I binders from the four databases IEDB [2], EPIMHC [3], MHCBN [4] and SYFPEITHI [5] were curated as the positive samples. Secondly, allotype-specific HLA-I ligands detected by the mass spectrometry technology in the literature were curated to be the positive samples. Thirdly, HLA-I binding peptides used as the training positives from the other HLA-I binding prediction tools were also included as the positive samples. Non-specific HLA-I alleles and their corresponding peptides were removed. Only the polypeptides with the lengths between 8-14 amino acids and an HLA-I allele with at least 50 binding peptides were kept for further analysis.

This study used the same method of generative the negative samples as in Anthem [1]. In summary, the negative samples were defined as the randomly retrieved sequence segments from the source proteins of the HLA-I immunopeptidomes in the database IEDB [2] and satisfying the following conditions. (i) The negative samples matched the lengths of the positive peptides binding to a specific HLA-I allele. (ii) For each HLA-I allele, we constructed almost the same number of negative samples to that of the positives, as similar in [1]. (iii) No identical negative samples were kept in the dataset of the HLA-I allele subtype.

So we have a binary classification dataset for each peptide length (between 8-14 amino acids) of each HLA-I allele, as shown in the Supplementary Table S1. Each dataset was randomly split into the training, validating and testing subsets by the ratio 3:1:1. We have 539022, 179673 and 172526 HLA-I binding peptides in the training, validating and testing datasets, respectively. The summarized numbers of HLA-I binding peptides for each peptide length were summarized in the Table 1.

This study used the pseudo sequence encoding strategy from the NetMHCPan [6], which transformed a HLA sequence into a pseudo-sequence containing 34 amino acid residues. The detailed encoding strategy may be found in the original study, and the file consisting of mapping relations was released in the Python implementation of HLAB.

Supplementary Table S1

A statistical summary of the peptide binders used for both the training, validating and testing datasets.

Length	HLA	Number of training peptides	Number of validating peptides	Number of testing peptides
8	HLA-A*01:01	410	125	135
	HLA-A*02:01	952	303	315
	HLA-A*03:01	345	110	115

HLA-A*11:01	112	25	35
HLA-A*24:02	277	74	89
HLA-A*29:02	239	80	81
HLA-B*07:02	1085	362	363
HLA-B*08:01	1417	432	463
HLA-B*13:02	92	21	29
HLA-B*14:02	646	197	213
HLA-B*15:01	674	217	225
HLA-B*18:01	608	225	211
HLA-B*18:03	122	47	43
HLA-B*27:05	965	284	313
HLA-B*27:09	117	36	41
HLA-B*35:01	282	87	93
HLA-B*37:01	703	266	245
HLA-B*39:01	166	43	55
HLA-B*39:24	155	44	51
HLA-B*40:01	130	33	43
HLA-B*40:02	1797	594	599
HLA-B*44:02	183	50	59
HLA-B*44:03	168	55	57
HLA-B*46:01	113	44	41
HLA-B*49:01	782	239	257
HLA-B*51:01	1311	458	443
HLA-B*51:08	97	40	35
HLA-B*52:01	465	144	153
HLA-B*54:01	148	51	51
HLA-B*57:01	482	161	163
HLA-B*57:03	336	117	115
HLA-B*58:01	468	143	155
HLA-C*01:02	329	104	109
HLA-C*02:02	152	39	49
HLA-C*03:03	216	55	69
HLA-C*03:04	346	107	115
HLA-C*04:01	937	320	317
HLA-C*05:01	867	282	289
HLA-C*06:02	200	73	71
HLA-C*07:01	267	88	91
HLA-C*07:02	319	98	107
HLA-C*07:04	122	31	39
HLA-C*08:02	951	346	325
HLA-C*12:03	185	50	61
HLA-C*14:02	591	186	195
HLA-C*15:02	225	80	79
HLA-C*16:01	950	289	311

	HLA-C*17:01	139	54	51
	HLA-A*01:01	6314	2033	2089
	HLA-A*02:01	23435	7912	7783
	HLA-A*02:02	1806	611	605
	HLA-A*02:03	3883	1308	1299
	HLA-A*02:04	1656	549	553
	HLA-A*02:05	2724	939	917
	HLA-A*02:06	4761	1626	1599
	HLA-A*02:07	2897	996	975
	HLA-A*02:11	492	165	165
	HLA-A*02:12	399	154	141
	HLA-A*02:16	241	64	77
	HLA-A*02:17	172	57	59
	HLA-A*02:19	296	101	101
	HLA-A*02:20	1219	386	403
	HLA-A*02:50	106	37	37
	HLA-A*03:01	11043	3638	3673
	HLA-A*11:01	8098	2721	2707
	HLA-A*23:01	3681	1186	1219
	HLA-A*24:02	8120	2639	2669
	HLA-A*24:03	466	151	157
	HLA-A*24:06	147	38	47
9	HLA-A*24:13	174	63	61
	HLA-A*25:01	144	49	51
	HLA-A*26:01	2329	780	779
	HLA-A*26:02	286	91	97
	HLA-A*26:03	95	38	35
	HLA-A*29:02	6293	1908	2053
	HLA-A*30:01	1860	601	617
	HLA-A*30:02	857	270	237
	HLA-A*31:01	4858	1637	1625
	HLA-A*32:01	4141	1342	1373
	HLA-A*32:07	105	36	37
	HLA-A*32:15	90	27	31
	HLA-A*33:01	817	300	281
	HLA-A*66:01	116	33	39
	HLA-A*68:01	7719	2532	2565
	HLA-A*68:02	5066	1727	1699
	HLA-A*68:23	100	29	35
	HLA-A*69:01	1256	465	433
	HLA-A*80:01	209	76	73
	HLA-B*07:02	12272	4139	4105
	HLA-B*08:01	6372	2071	2113
	HLA-B*13:02	3626	1199	1207

HLA-B*14:01	110	43	39
HLA-B*14:02	3952	1287	1311
HLA-B*15:01	14238	4847	4773
HLA-B*15:02	318	105	107
HLA-B*15:03	483	172	165
HLA-B*15:09	121	44	43
HLA-B*15:11	1098	379	371
HLA-B*15:17	597	190	199
HLA-B*15:18	1317	406	433
HLA-B*15:42	425	142	143
HLA-B*18:01	2493	830	833
HLA-B*18:03	197	60	65
HLA-B*27:01	2289	736	757
HLA-B*27:02	1567	484	515
HLA-B*27:03	610	199	205
HLA-B*27:04	2450	857	829
HLA-B*27:05	24018	8151	4251
HLA-B*27:06	978	315	325
HLA-B*27:07	1322	439	443
HLA-B*27:08	1113	388	377
HLA-B*27:09	3658	1217	1221
HLA-B*27:20	111	36	39
HLA-B*35:01	9852	3197	3265
HLA-B*35:03	4424	1437	1467
HLA-B*35:08	1141	410	389
HLA-B*37:01	4145	1358	1377
HLA-B*38:01	4645	1594	1561
HLA-B*39:01	5341	1724	1767
HLA-B*39:06	1869	658	633
HLA-B*39:24	586	191	195
HLA-B*40:01	4250	1487	1437
HLA-B*40:02	6165	2086	2065
HLA-B*41:01	647	220	219
HLA-B*44:02	6613	2176	2199
HLA-B*44:03	5350	1781	1785
HLA-B*45:01	2564	863	859
HLA-B*45:06	426	135	143
HLA-B*46:01	1771	616	599
HLA-B*48:01	146	43	49
HLA-B*49:01	4446	1443	1473
HLA-B*50:01	1870	643	631
HLA-B*51:01	4067	1382	1365
HLA-B*51:08	571	206	197
HLA-B*52:01	156	59	55

	HLA-B*53:01	635	206	197
	HLA-B*54:01	1033	358	349
	HLA-B*56:01	553	184	187
	HLA-B*57:01	7107	2340	2363
	HLA-B*57:03	3244	1091	1085
	HLA-B*58:01	4109	1306	1329
	HLA-B*73:01	639	178	207
	HLA-B*83:01	389	126	131
	HLA-C*01:02	1550	543	525
	HLA-C*02:02	6187	2070	2065
	HLA-C*03:03	5633	1946	1897
	HLA-C*03:04	5025	1724	1689
	HLA-C*04:01	9692	3271	3243
	HLA-C*05:01	4350	1507	1467
	HLA-C*06:02	6678	2165	2213
	HLA-C*07:01	4256	1431	1423
	HLA-C*07:02	3695	1276	1245
	HLA-C*07:04	3288	1071	1091
	HLA-C*08:02	5886	1971	1965
	HLA-C*12:03	2246	755	751
	HLA-C*14:02	2213	712	733
	HLA-C*15:02	2153	730	723
	HLA-C*16:01	3936	1283	1307
	HLA-C*17:01	500	171	169
	HLA-A*01:01	2714	861	895
	HLA-A*02:01	6364	2105	2119
	HLA-A*02:02	1181	412	401
	HLA-A*02:03	1873	682	641
	HLA-A*02:04	184	57	63
	HLA-A*02:05	448	151	151
	HLA-A*02:06	1273	426	427
	HLA-A*02:07	532	197	185
	HLA-A*02:17	184	55	61
	HLA-A*03:01	2974	995	993
	HLA-A*11:01	3491	1214	1177
	HLA-A*23:01	659	286	237
	HLA-A*24:02	2009	736	689
	HLA-A*24:06	120	33	41
	HLA-A*26:01	378	143	131
	HLA-A*29:02	1494	463	491
	HLA-A*30:01	225	88	79
	HLA-A*30:02	416	149	143
	HLA-A*31:01	1416	457	471
	HLA-A*32:01	687	230	231

HLA-A*33:01	782	261	263
HLA-A*68:01	2142	733	721
HLA-A*68:02	1791	628	607
HLA-A*69:01	154	41	51
HLA-B*07:02	3222	1061	1073
HLA-B*08:01	421	128	139
HLA-B*13:02	117	48	43
HLA-B*14:02	236	73	79
HLA-B*15:01	3493	1102	1151
HLA-B*18:01	252	85	85
HLA-B*27:01	1129	374	377
HLA-B*27:02	1088	353	363
HLA-B*27:03	292	77	95
HLA-B*27:04	354	119	121
HLA-B*27:05	12050	3973	1767
HLA-B*27:06	301	96	101
HLA-B*27:07	624	205	209
HLA-B*27:08	627	214	213
HLA-B*27:09	1330	429	441
HLA-B*35:01	1672	559	559
HLA-B*35:03	296	95	99
HLA-B*35:08	269	100	93
HLA-B*37:01	470	171	163
HLA-B*39:01	305	98	103
HLA-B*40:01	1375	426	453
HLA-B*40:02	2179	720	727
HLA-B*41:01	94	31	33
HLA-B*44:02	2426	867	825
HLA-B*44:03	2197	713	729
HLA-B*44:27	76	33	29
HLA-B*45:01	666	197	217
HLA-B*46:01	444	161	153
HLA-B*49:01	637	212	215
HLA-B*50:01	243	100	87
HLA-B*51:01	989	316	329
HLA-B*53:01	341	130	119
HLA-B*54:01	391	130	133
HLA-B*56:01	209	76	73
HLA-B*57:01	3680	1235	1231
HLA-B*57:03	1289	448	435
HLA-B*58:01	1180	399	397
HLA-C*01:02	478	171	165
HLA-C*02:02	732	251	247
HLA-C*03:03	421	144	143

11	HLA-C*03:04	468	181	165
	HLA-C*04:01	1373	474	463
	HLA-C*05:01	686	251	237
	HLA-C*06:02	562	215	195
	HLA-C*07:01	479	156	161
	HLA-C*07:02	322	111	111
	HLA-C*07:04	180	73	65
	HLA-C*08:02	686	207	225
	HLA-C*14:02	353	154	129
	HLA-C*16:01	270	97	93
	HLA-A*01:01	1378	467	463
	HLA-A*02:01	3057	952	1005
	HLA-A*02:03	145	58	53
	HLA-A*02:04	173	56	59
	HLA-A*02:05	102	35	35
	HLA-A*02:07	451	150	153
	HLA-A*03:01	1002	315	331
	HLA-A*11:01	1392	469	467
	HLA-A*23:01	161	46	53
	HLA-A*24:02	1085	396	373
	HLA-A*24:06	104	45	39
	HLA-A*29:02	549	202	189
	HLA-A*31:01	382	143	133
	HLA-A*32:01	290	105	101
	HLA-A*68:01	313	114	109
	HLA-A*68:02	412	143	141
	HLA-B*07:02	1668	501	545
	HLA-B*08:01	197	66	67
	HLA-B*15:01	1346	439	447
	HLA-B*27:01	679	202	221
	HLA-B*27:02	704	227	235
	HLA-B*27:03	219	70	75
	HLA-B*27:04	155	52	53
	HLA-B*27:05	8210	2639	1159
	HLA-B*27:06	152	49	51
	HLA-B*27:07	353	128	121
	HLA-B*27:08	441	148	149
	HLA-B*27:09	834	293	283
	HLA-B*35:01	760	273	259
	HLA-B*35:03	173	58	59
	HLA-B*35:08	151	62	55
	HLA-B*37:01	87	24	29
	HLA-B*39:01	203	70	69
	HLA-B*40:01	670	207	221

	HLA-B*40:02	877	280	291
	HLA-B*44:02	1106	387	375
	HLA-B*44:03	888	285	295
	HLA-B*45:01	181	68	63
	HLA-B*46:01	107	32	37
	HLA-B*49:01	140	39	47
	HLA-B*51:01	546	169	181
	HLA-B*54:01	168	67	61
	HLA-B*56:01	98	31	33
	HLA-B*57:01	3404	1199	1153
	HLA-B*57:03	1001	334	335
	HLA-B*58:01	624	201	207
	HLA-C*01:02	272	79	89
	HLA-C*02:02	154	49	53
	HLA-C*03:03	119	34	41
	HLA-C*03:04	147	52	21
	HLA-C*04:01	384	127	129
	HLA-C*05:01	380	93	121
	HLA-C*06:02	211	68	71
	HLA-C*07:01	239	84	83
	HLA-C*07:02	121	38	41
	HLA-C*08:02	172	61	61
	HLA-C*16:01	86	21	29
	HLA-A*01:01	1018	359	347
	HLA-A*02:01	1368	457	457
	HLA-A*03:01	502	189	175
	HLA-A*11:01	351	138	125
	HLA-A*24:02	370	121	125
	HLA-A*29:02	190	67	67
	HLA-A*31:01	143	52	51
	HLA-A*68:01	102	23	33
	HLA-A*68:02	234	69	77
	HLA-B*07:02	661	212	219
12	HLA-B*08:01	218	73	75
	HLA-B*15:01	469	144	155
	HLA-B*27:01	220	83	77
	HLA-B*27:02	353	114	119
	HLA-B*27:03	93	26	31
	HLA-B*27:05	4464	1517	1497
	HLA-B*27:07	141	46	49
	HLA-B*27:08	188	61	65
	HLA-B*27:09	361	122	123
	HLA-B*35:01	228	61	73
	HLA-B*40:01	183	62	63

	HLA-B*40:02	249	78	83
	HLA-B*44:02	358	157	131
	HLA-B*44:03	249	88	87
	HLA-B*51:01	438	125	143
	HLA-B*57:01	1771	538	579
	HLA-B*57:03	223	66	73
	HLA-B*58:01	212	67	71
	HLA-C*01:02	231	92	83
	HLA-C*04:01	139	54	51
	HLA-C*05:01	106	47	41
	HLA-C*06:02	156	45	53
	HLA-C*07:01	209	78	73
	HLA-A*01:01	652	221	221
	HLA-A*02:01	556	205	191
	HLA-A*03:01	98	41	37
	HLA-A*11:01	112	29	37
	HLA-A*24:02	244	69	79
	HLA-A*29:02	219	78	77
	HLA-A*31:01	78	35	29
	HLA-A*68:02	136	43	47
	HLA-B*07:02	390	123	129
	HLA-B*15:01	297	104	103
	HLA-B*27:01	105	38	37
	HLA-B*27:02	155	60	55
13	HLA-B*27:05	3055	986	1013
	HLA-B*27:08	88	33	31
	HLA-B*27:09	221	68	73
	HLA-B*35:01	96	37	35
	HLA-B*44:02	128	37	43
	HLA-B*51:01	117	36	41
	HLA-B*57:01	999	296	325
	HLA-B*57:03	114	39	41
	HLA-B*58:01	111	34	37
	HLA-C*04:01	135	40	45
	HLA-C*05:01	89	32	31
	HLA-C*06:02	178	61	61
	HLA-A*01:01	313	96	103
	HLA-A*02:01	291	116	103
	HLA-A*24:02	99	30	33
	HLA-A*68:02	104	37	37
14	HLA-B*07:02	207	70	71
	HLA-B*15:01	179	74	65
	HLA-B*27:05	2283	752	761
	HLA-B*27:09	140	61	51

HLA-B*35:01	92	25	31
HLA-B*57:01	536	175	179
HLA-C*04:01	114	31	39
HLA-C*05:01	94	33	33
HLA-C*06:02	220	69	73

Supplementary Table S2

Different binary classification tasks were optimized to have different values for the UMAP reduced dimensions (UMAP Dimension), and the percent of the top-ranked features (FS FNPercent).

Length	HLA-I	Classifier	Feauture Selection	UMAP Dimension	FS FNPercent
8	HLA-A*01:01	LR	SVM_RFE	16	0.55
		XGBoost	RF	16	0.95
		Bagging	RF	16	0.95
		SVM	W-test	14	0.55
		KNN	LR_RFE	12	0.55
		NB	SVM_RFE	12	0.55
		Dtree	T-test	15	0.75
	HLA-A*02:01	NB	T-test	6	0.75
		SVM	W-test	18	0.95
		XGBoost	LR_RFE	9	0.95
		KNN	T-test	9	0.75
		LR	W-test	15	0.95
		Bagging	RF	8	0.95
		Dtree	T-test	13	0.95
	HLA-A*03:01	KNN	SVM_RFE	13	0.55
		XGBoost	T-test	10	0.95
		NB	T-test	9	0.55
		LR	T-test	9	0.95
		Bagging	RF	10	0.95
		SVM	T-test	6	0.95
		Dtree	T-test	5	0.75
	HLA-A*11:01	Dtree	W-test	7	0.55
		Bagging	LR_RFE	5	0.55
		XGBoost	T-test	7	0.95
		NB	T-test	5	0.95
		SVM	T-test	5	0.75
		LR	T-test	5	0.75

	KNN	T-test	5	0.75
HLA-A*24:02	XGBoost	T-test	14	0.75
	LR	T-test	10	0.55
	Dtree	T-test	6	0.95
	SVM	RF	16	0.75
	Bagging	T-test	6	0.55
	KNN	RF	16	0.75
	NB	T-test	5	0.95
HLA-A*29:02	NB	RF	6	0.95
	LR	RF	6	0.75
	XGBoost	SVM_RFE	15	0.55
	Bagging	T-test	9	0.95
	KNN	W-test	8	0.55
	Dtree	T-test	9	0.95
	SVM	RF	17	0.75
HLA-B*07:02	NB	SVM_RFE	12	0.75
	XGBoost	T-test	12	0.95
	Bagging	W-test	11	0.95
	KNN	T-test	12	0.55
	LR	RF	13	0.75
	Dtree	T-test	13	0.55
	SVM	T-test	13	0.75
HLA-B*08:01	XGBoost	RF	5	0.95
	LR	RF	18	0.75
	SVM	T-test	5	0.75
	Bagging	T-test	8	0.95
	NB	T-test	8	0.95
	KNN	T-test	5	0.75
	Dtree	W-test	9	0.95
HLA-B*13:02	Dtree	T-test	11	0.75
	Bagging	T-test	15	0.75
	SVM	T-test	17	0.55
	LR	T-test	17	0.55
	NB	W-test	12	0.55
	KNN	RF	17	0.75
	XGBoost	SVM_RFE	15	0.55
HLA-B*14:02	Bagging	T-test	5	0.95
	XGBoost	T-test	15	0.95
	Dtree	W-test	7	0.95
	NB	T-test	12	0.75
	SVM	T-test	5	0.95
	LR	T-test	11	0.75
	KNN	T-test	5	0.95
HLA-B*15:01	XGBoost	T-test	8	0.55

	Bagging	LR_RFE	10	0.95
	KNN	SVM_RFE	7	0.75
	SVM	T-test	12	0.55
	Dtree	T-test	14	0.75
	LR	RF	18	0.95
	NB	T-test	9	0.75
HLA-B*18:01	SVM	T-test	5	0.75
	XGBoost	T-test	6	0.75
	Dtree	T-test	9	0.75
	KNN	T-test	5	0.75
	Bagging	T-test	6	0.75
	NB	T-test	6	0.95
	LR	T-test	7	0.95
HLA-B*18:03	Bagging	LR_RFE	8	0.95
	SVM	T-test	5	0.75
	XGBoost	T-test	5	0.75
	NB	T-test	5	0.75
	LR	T-test	5	0.75
	KNN	T-test	5	0.55
	Dtree	T-test	5	0.75
HLA-B*27:05	LR	RF	16	0.75
	KNN	W-test	11	0.95
	XGBoost	LR_RFE	15	0.95
	SVM	T-test	9	0.75
	Bagging	W-test	11	0.95
	NB	W-test	14	0.95
	Dtree	W-test	11	0.95
HLA-B*27:09	Bagging	T-test	7	0.55
	NB	T-test	7	0.75
	Dtree	T-test	6	0.75
	KNN	T-test	7	0.55
	SVM	T-test	7	0.55
	LR	T-test	7	0.55
	XGBoost	T-test	7	0.55
HLA-B*35:01	Bagging	SVM_RFE	6	0.55
	XGBoost	RF	10	0.75
	KNN	RF	11	0.55
	Dtree	RF	13	0.95
	LR	T-test	8	0.75
	NB	T-test	9	0.95
	SVM	T-test	5	0.75
HLA-B*37:01	Dtree	T-test	10	0.75
	LR	T-test	5	0.75
	XGBoost	W-test	5	0.75

	NB	T-test	5	0.95
	SVM	T-test	7	0.55
	KNN	T-test	7	0.55
	Bagging	T-test	10	0.75
HLA-B*39:01	LR	T-test	12	0.75
	XGBoost	T-test	5	0.95
	NB	SVM_RFE	5	0.95
	Bagging	T-test	5	0.95
	KNN	W-test	7	0.75
	Dtree	T-test	7	0.95
	SVM	T-test	5	0.95
HLA-B*39:24	Dtree	T-test	11	0.75
	XGBoost	T-test	11	0.55
	Bagging	T-test	9	0.95
	NB	T-test	9	0.95
	LR	T-test	9	0.55
	KNN	T-test	9	0.55
	SVM	T-test	9	0.55
HLA-B*40:01	XGBoost	W-test	14	0.55
	NB	W-test	7	0.75
	KNN	T-test	9	0.55
	Dtree	T-test	5	0.75
	LR	T-test	5	0.75
	Bagging	T-test	5	0.75
	SVM	T-test	5	0.75
HLA-B*40:02	XGBoost	T-test	12	0.75
	SVM	RF	14	0.95
	KNN	W-test	14	0.95
	NB	SVM_RFE	17	0.75
	LR	T-test	12	0.55
	Bagging	RF	7	0.95
	Dtree	SVM_RFE	8	0.75
HLA-B*44:02	Dtree	T-test	7	0.75
	NB	T-test	7	0.75
	XGBoost	T-test	7	0.75
	KNN	T-test	7	0.55
	SVM	T-test	7	0.55
	LR	T-test	6	0.95
	Bagging	T-test	5	0.75
HLA-B*44:03	SVM	T-test	6	0.55
	NB	T-test	5	0.55
	KNN	T-test	5	0.75
	LR	T-test	5	0.75
	XGBoost	T-test	5	0.95

	Bagging	T-test	5	0.95
	Dtree	T-test	5	0.95
HLA-B*46:01	Dtree	SVM_RFE	12	0.55
	SVM	T-test	5	0.75
	Bagging	T-test	8	0.95
	XGBoost	T-test	7	0.75
	LR	T-test	5	0.75
	NB	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-B*49:01	Dtree	LR_RFE	8	0.95
	Bagging	LR_RFE	8	0.95
	XGBoost	LR_RFE	8	0.95
	LR	SVM_RFE	17	0.95
	KNN	T-test	7	0.75
	SVM	T-test	7	0.55
	NB	W-test	17	0.95
HLA-B*51:01	NB	SVM_RFE	15	0.55
	Dtree	LR_RFE	16	0.95
	LR	W-test	16	0.55
	XGBoost	W-test	12	0.55
	Bagging	T-test	9	0.95
	SVM	T-test	6	0.55
	KNN	T-test	6	0.55
HLA-B*51:08	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	Bagging	T-test	5	0.55
	LR	T-test	5	0.55
	Dtree	T-test	5	0.55
HLA-B*52:01	Dtree	T-test	6	0.75
	NB	T-test	7	0.95
	SVM	T-test	5	0.75
	XGBoost	T-test	6	0.55
	LR	T-test	5	0.95
	KNN	T-test	5	0.75
	Bagging	T-test	5	0.55
HLA-B*54:01	KNN	SVM_RFE	17	0.75
	LR	SVM_RFE	5	0.55
	Bagging	RF	17	0.95
	Dtree	W-test	8	0.95
	NB	T-test	18	0.95
	XGBoost	T-test	13	0.95
	SVM	T-test	18	0.55

HLA-B*57:01	KNN	T-test	15	0.95
	Dtree	T-test	10	0.95
	NB	T-test	18	0.75
	SVM	T-test	10	0.55
	XGBoost	T-test	6	0.95
	Bagging	T-test	6	0.95
	LR	T-test	10	0.95
HLA-B*57:03	Bagging	RF	18	0.55
	NB	RF	8	0.75
	Dtree	W-test	10	0.55
	SVM	SVM_RFE	8	0.55
	XGBoost	RF	8	0.55
	LR	T-test	17	0.95
	KNN	T-test	6	0.75
HLA-B*58:01	Dtree	SVM_RFE	11	0.95
	Bagging	SVM_RFE	5	0.95
	XGBoost	T-test	9	0.95
	KNN	RF	13	0.55
	NB	T-test	9	0.95
	LR	T-test	7	0.95
	SVM	T-test	13	0.95
HLA-C*01:02	Dtree	W-test	6	0.75
	SVM	T-test	7	0.95
	LR	T-test	7	0.75
	NB	T-test	7	0.55
	KNN	T-test	7	0.55
	XGBoost	T-test	5	0.75
	Bagging	T-test	5	0.75
HLA-C*02:02	Bagging	SVM_RFE	5	0.95
	Dtree	LR_RFE	7	0.75
	SVM	T-test	5	0.75
	XGBoost	T-test	5	0.75
	KNN	T-test	5	0.75
	NB	T-test	5	0.75
	LR	T-test	5	0.75
HLA-C*03:03	Dtree	T-test	10	0.95
	Bagging	T-test	10	0.55
	LR	T-test	5	0.95
	NB	T-test	5	0.95
	SVM	T-test	5	0.95
	XGBoost	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-C*03:04	NB	LR_RFE	7	0.75
	Bagging	W-test	11	0.55

	SVM	W-test	9	0.75
	KNN	W-test	9	0.75
	LR	T-test	11	0.75
	XGBoost	W-test	13	0.75
	Dtree	W-test	13	0.75
HLA-C*04:01	Bagging	SVM_RFE	13	0.75
	KNN	T-test	15	0.55
	SVM	T-test	6	0.55
	NB	RF	9	0.95
	XGBoost	W-test	10	0.55
	LR	T-test	12	0.75
	Dtree	W-test	11	0.55
HLA-C*05:01	Dtree	LR_RFE	9	0.75
	NB	T-test	6	0.55
	XGBoost	SVM_RFE	7	0.75
	SVM	W-test	9	0.95
	LR	T-test	8	0.95
	Bagging	T-test	7	0.55
	KNN	T-test	6	0.95
HLA-C*06:02	Dtree	W-test	17	0.55
	KNN	T-test	6	0.55
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.95
	LR	T-test	6	0.55
	NB	T-test	6	0.55
	SVM	T-test	6	0.55
HLA-C*07:01	XGBoost	T-test	5	0.95
	LR	T-test	5	0.75
	NB	T-test	10	0.95
	KNN	T-test	10	0.95
	Bagging	T-test	5	0.95
	SVM	T-test	5	0.95
	Dtree	T-test	11	0.95
HLA-C*07:02	NB	W-test	6	0.95
	KNN	T-test	12	0.95
	LR	T-test	10	0.55
	SVM	T-test	9	0.95
	Dtree	T-test	8	0.95
	Bagging	T-test	8	0.95
	XGBoost	T-test	8	0.95
HLA-C*07:04	KNN	RF	11	0.95
	SVM	RF	11	0.95
	LR	T-test	5	0.75
	Dtree	T-test	5	0.95

	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	XGBoost	T-test	5	0.95
HLA-C*08:02	Dtree	RF	8	0.75
	Bagging	W-test	12	0.95
	XGBoost	T-test	14	0.75
	SVM	T-test	5	0.75
	LR	T-test	6	0.95
	KNN	T-test	5	0.75
	NB	T-test	6	0.95
HLA-C*12:03	XGBoost	T-test	5	0.55
	Dtree	T-test	5	0.75
	NB	T-test	5	0.95
	SVM	T-test	8	0.75
	Bagging	T-test	8	0.75
	LR	T-test	8	0.75
	KNN	T-test	14	0.55
HLA-C*14:02	Bagging	RF	16	0.95
	NB	T-test	5	0.95
	LR	T-test	14	0.75
	XGBoost	T-test	12	0.75
	SVM	T-test	6	0.55
	Dtree	T-test	5	0.95
	KNN	T-test	5	0.75
HLA-C*15:02	SVM	T-test	6	0.95
	KNN	T-test	7	0.55
	Bagging	W-test	6	0.75
	XGBoost	T-test	16	0.95
	LR	T-test	8	0.75
	NB	T-test	7	0.95
	Dtree	W-test	6	0.75
HLA-C*16:01	NB	T-test	7	0.95
	Dtree	SVM_RFE	5	0.75
	Bagging	LR_RFE	12	0.55
	LR	W-test	12	0.95
	XGBoost	T-test	7	0.75
	KNN	T-test	5	0.95
	SVM	T-test	5	0.95
HLA-C*17:01	SVM	T-test	5	0.55
	LR	T-test	15	0.95
	XGBoost	T-test	5	0.55
	Dtree	RF	6	0.55
	Bagging	T-test	5	0.55
	NB	T-test	15	0.95

		KNN	T-test	15	0.95
9	HLA-A*01:01	XGBoost	SVM_RFE	12	0.55
		KNN	LR_RFE	11	0.75
		NB	RF	8	0.95
		SVM	W-test	6	0.75
		LR	T-test	18	0.75
		Bagging	SVM_RFE	12	0.55
		Dtree	W-test	11	0.55
	HLA-A*02:01	LR	SVM_RFE	17	0.95
		SVM	W-test	14	0.55
		NB	SVM_RFE	17	0.75
		XGBoost	LR_RFE	5	0.95
		KNN	SVM_RFE	18	0.95
		Bagging	T-test	5	0.95
		Dtree	T-test	5	0.95
	HLA-A*02:02	NB	LR_RFE	9	0.95
		XGBoost	LR_RFE	12	0.55
		KNN	RF	8	0.55
		SVM	T-test	12	0.55
		LR	T-test	14	0.95
		Bagging	W-test	5	0.75
		Dtree	RF	7	0.95
	HLA-A*02:03	LR	W-test	18	0.95
		XGBoost	T-test	10	0.55
		NB	T-test	11	0.95
		SVM	T-test	5	0.75
		KNN	T-test	16	0.55
		Bagging	T-test	5	0.95
		Dtree	T-test	10	0.55
	HLA-A*02:04	SVM	SVM_RFE	17	0.95
		Bagging	W-test	12	0.55
		KNN	W-test	8	0.55
		XGBoost	T-test	12	0.95
		LR	T-test	15	0.95
		NB	W-test	11	0.95
		Dtree	T-test	12	0.95
	HLA-B*07:02	KNN	LR_RFE	7	0.75
		SVM	LR_RFE	8	0.55
		LR	SVM_RFE	11	0.95
		XGBoost	T-test	8	0.75
		Bagging	RF	13	0.55
		NB	SVM_RFE	17	0.95
		Dtree	W-test	13	0.75
	HLA-B*08:01	XGBoost	W-test	8	0.75

	SVM	T-test	7	0.95
	KNN	SVM_RFE	10	0.55
	Bagging	W-test	8	0.55
	LR	SVM_RFE	13	0.75
	NB	T-test	15	0.75
	Dtree	SVM_RFE	9	0.75
HLA-B*13:02	NB	LR_RFE	11	0.55
	XGBoost	W-test	7	0.95
	KNN	W-test	12	0.55
	LR	T-test	12	0.95
	SVM	T-test	8	0.75
	Bagging	T-test	9	0.95
	Dtree	LR_RFE	15	0.95
HLA-B*14:01	Dtree	RF	6	0.95
	SVM	T-test	5	0.75
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.95
	LR	T-test	5	0.75
	NB	T-test	5	0.75
	KNN	T-test	5	0.55
HLA-B*14:02	KNN	T-test	15	0.75
	SVM	LR_RFE	5	0.75
	XGBoost	RF	6	0.95
	LR	T-test	15	0.75
	NB	T-test	18	0.55
	Bagging	SVM_RFE	12	0.95
	Dtree	RF	15	0.75
HLA-B*15:01	SVM	T-test	15	0.75
	KNN	T-test	9	0.75
	LR	SVM_RFE	15	0.95
	XGBoost	SVM_RFE	15	0.75
	Bagging	SVM_RFE	14	0.95
	NB	SVM_RFE	13	0.95
	Dtree	W-test	7	0.55
HLA-B*15:02	NB	LR_RFE	13	0.55
	LR	RF	9	0.55
	Dtree	T-test	8	0.95
	Bagging	T-test	8	0.95
	XGBoost	T-test	8	0.75
	KNN	T-test	7	0.95
	SVM	T-test	7	0.55
HLA-B*15:03	Dtree	T-test	11	0.95
	KNN	RF	16	0.75
	Bagging	T-test	11	0.95

	LR	RF	8	0.75
	XGBoost	T-test	11	0.95
	SVM	T-test	11	0.95
	NB	W-test	9	0.95
HLA-B*15:09	Dtree	SVM_RFE	6	0.55
	Bagging	SVM_RFE	6	0.55
	XGBoost	SVM_RFE	6	0.55
	KNN	T-test	5	0.75
	LR	T-test	5	0.75
	NB	T-test	5	0.75
	SVM	T-test	5	0.75
HLA-B*15:11	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	Bagging	T-test	5	0.95
	Dtree	T-test	5	0.95
	XGBoost	T-test	7	0.95
	LR	T-test	7	0.95
HLA-B*15:17	Bagging	W-test	13	0.95
	NB	LR_RFE	8	0.55
	SVM	SVM_RFE	6	0.95
	KNN	T-test	6	0.75
	Dtree	SVM_RFE	7	0.95
	XGBoost	T-test	8	0.95
	LR	T-test	7	0.95
HLA-B*15:18	Dtree	SVM_RFE	11	0.75
	SVM	T-test	5	0.95
	LR	T-test	9	0.75
	NB	T-test	9	0.75
	XGBoost	T-test	8	0.75
	Bagging	T-test	6	0.75
	KNN	T-test	6	0.55
HLA-B*15:42	XGBoost	SVM_RFE	5	0.95
	Bagging	SVM_RFE	5	0.75
	Dtree	RF	11	0.55
	KNN	W-test	14	0.55
	SVM	W-test	14	0.55
	NB	LR_RFE	7	0.75
	LR	T-test	7	0.55
HLA-B*18:01	LR	RF	17	0.75
	SVM	RF	17	0.55
	KNN	RF	17	0.55
	XGBoost	LR_RFE	16	0.95
	Bagging	LR_RFE	16	0.55

	NB	RF	14	0.95
	Dtree	SVM_RFE	17	0.55
HLA-B*18:03	KNN	SVM_RFE	16	0.75
	NB	RF	12	0.55
	Dtree	W-test	6	0.95
	Bagging	W-test	6	0.95
	XGBoost	W-test	6	0.95
	SVM	T-test	6	0.55
	LR	T-test	7	0.55
HLA-B*27:01	NB	SVM_RFE	5	0.55
	LR	LR_RFE	8	0.55
	KNN	LR_RFE	14	0.95
	Bagging	W-test	5	0.95
	SVM	T-test	5	0.75
	XGBoost	T-test	5	0.75
	Dtree	T-test	5	0.95
HLA-B*27:02	Bagging	LR_RFE	11	0.75
	XGBoost	W-test	11	0.55
	NB	W-test	10	0.55
	KNN	T-test	5	0.95
	LR	T-test	7	0.95
	Dtree	T-test	6	0.55
	SVM	T-test	6	0.55
HLA-B*27:03	Dtree	T-test	10	0.95
	XGBoost	T-test	5	0.95
	Bagging	T-test	10	0.95
	SVM	T-test	6	0.75
	KNN	T-test	5	0.75
	LR	T-test	5	0.95
	NB	T-test	5	0.95
HLA-B*27:04	XGBoost	RF	10	0.95
	LR	W-test	6	0.95
	NB	RF	11	0.95
	KNN	RF	10	0.75
	Bagging	W-test	7	0.55
	Dtree	SVM_RFE	12	0.55
	SVM	W-test	7	0.55
HLA-B*27:05	LR	LR_RFE	16	0.75
	NB	SVM_RFE	15	0.55
	SVM	W-test	7	0.55
	XGBoost	SVM_RFE	9	0.95
	KNN	T-test	7	0.75
	Bagging	RF	7	0.75
	Dtree	RF	7	0.75

HLA-B*27:06	Bagging	T-test	6	0.95
	NB	T-test	11	0.95
	XGBoost	RF	9	0.95
	LR	W-test	8	0.75
	Dtree	RF	16	0.55
	KNN	W-test	9	0.95
	SVM	T-test	5	0.75
HLA-B*27:07	SVM	T-test	5	0.95
	KNN	T-test	5	0.75
	Bagging	T-test	8	0.55
	NB	T-test	6	0.95
	Dtree	T-test	6	0.75
	XGBoost	T-test	6	0.75
	LR	T-test	8	0.95
HLA-B*27:08	KNN	T-test	6	0.55
	SVM	T-test	6	0.55
	Bagging	RF	12	0.75
	XGBoost	W-test	9	0.55
	LR	T-test	12	0.75
	NB	T-test	6	0.75
	Dtree	SVM_RFE	5	0.75
HLA-B*27:09	NB	SVM_RFE	17	0.55
	LR	SVM_RFE	9	0.95
	KNN	W-test	7	0.95
	XGBoost	W-test	7	0.95
	SVM	T-test	7	0.95
	Bagging	SVM_RFE	12	0.75
	Dtree	W-test	10	0.95
HLA-B*27:20	LR	T-test	15	0.75
	Dtree	RF	8	0.75
	Bagging	RF	11	0.75
	XGBoost	SVM_RFE	10	0.75
	KNN	LR_RFE	15	0.75
	SVM	T-test	5	0.55
	NB	T-test	5	0.55
HLA-B*35:01	LR	RF	16	0.95
	SVM	W-test	5	0.55
	NB	T-test	10	0.75
	XGBoost	T-test	6	0.75
	KNN	W-test	5	0.55
	Bagging	SVM_RFE	11	0.95
	Dtree	SVM_RFE	6	0.75
HLA-B*35:03	LR	RF	15	0.95
	SVM	W-test	5	0.95

	KNN	W-test	8	0.95
	Bagging	LR_RFE	12	0.75
	Dtree	RF	9	0.55
	NB	T-test	8	0.95
	XGBoost	T-test	8	0.75
HLA-B*35:08	XGBoost	LR_RFE	9	0.95
	Dtree	RF	5	0.75
	Bagging	T-test	9	0.55
	KNN	T-test	9	0.55
	LR	T-test	12	0.75
	SVM	T-test	11	0.95
	NB	T-test	8	0.95
HLA-B*37:01	KNN	LR_RFE	10	0.55
	XGBoost	T-test	8	0.55
	LR	T-test	11	0.95
	Dtree	W-test	6	0.75
	NB	T-test	6	0.55
	Bagging	W-test	6	0.75
	SVM	T-test	5	0.75
HLA-B*38:01	NB	LR_RFE	8	0.95
	SVM	T-test	7	0.75
	KNN	SVM_RFE	15	0.95
	LR	T-test	9	0.95
	Bagging	RF	10	0.95
	XGBoost	W-test	16	0.95
	Dtree	W-test	16	0.95
HLA-B*39:01	KNN	SVM_RFE	9	0.75
	XGBoost	W-test	13	0.75
	LR	T-test	12	0.75
	Bagging	SVM_RFE	8	0.95
	NB	W-test	8	0.95
	SVM	RF	8	0.55
	Dtree	T-test	5	0.75
HLA-B*39:06	LR	T-test	5	0.95
	KNN	RF	10	0.55
	SVM	W-test	15	0.95
	Dtree	T-test	13	0.95
	XGBoost	T-test	13	0.95
	Bagging	T-test	10	0.75
	NB	T-test	10	0.55
HLA-B*39:24	Dtree	T-test	7	0.55
	Bagging	T-test	6	0.95
	NB	T-test	6	0.55
	XGBoost	T-test	6	0.55

	LR	T-test	5	0.95
	SVM	T-test	5	0.75
	KNN	T-test	5	0.95
HLA-C*01:02	LR	RF	11	0.95
	SVM	T-test	12	0.55
	KNN	T-test	14	0.75
	NB	RF	11	0.75
	Dtree	W-test	10	0.95
	Bagging	W-test	10	0.95
	XGBoost	W-test	5	0.95
HLA-C*02:02	KNN	RF	14	0.75
	XGBoost	RF	7	0.55
	LR	RF	14	0.95
	NB	SVM_RFE	15	0.75
	SVM	RF	14	0.75
	Dtree	SVM_RFE	14	0.95
	Bagging	SVM_RFE	6	0.75
HLA-C*03:03	NB	LR_RFE	11	0.55
	LR	LR_RFE	11	0.75
	XGBoost	SVM_RFE	13	0.75
	KNN	W-test	10	0.95
	SVM	T-test	16	0.95
	Bagging	W-test	11	0.75
	Dtree	W-test	11	0.55
HLA-C*03:04	XGBoost	T-test	13	0.75
	KNN	SVM_RFE	9	0.55
	NB	LR_RFE	11	0.95
	SVM	T-test	12	0.75
	LR	RF	16	0.95
	Bagging	RF	8	0.95
	Dtree	W-test	5	0.75
HLA-C*04:01	XGBoost	T-test	7	0.75
	KNN	T-test	11	0.55
	NB	SVM_RFE	12	0.55
	Bagging	W-test	12	0.55
	SVM	T-test	12	0.55
	LR	LR_RFE	16	0.75
	Dtree	W-test	12	0.55
HLA-C*05:01	SVM	T-test	5	0.95
	XGBoost	SVM_RFE	11	0.55
	LR	T-test	16	0.75
	NB	T-test	12	0.75
	KNN	W-test	5	0.75
	Bagging	SVM_RFE	11	0.75

	Dtree	W-test	11	0.55
HLA-C*06:02	Bagging	T-test	18	0.75
	XGBoost	LR_RFE	15	0.55
	KNN	LR_RFE	16	0.95
	NB	W-test	5	0.75
	SVM	T-test	18	0.75
	LR	T-test	11	0.95
	Dtree	T-test	15	0.95
HLA-C*07:01	XGBoost	LR_RFE	12	0.75
	KNN	RF	11	0.75
	SVM	T-test	13	0.55
	LR	LR_RFE	11	0.75
	Bagging	T-test	5	0.75
	Dtree	RF	12	0.95
	NB	T-test	12	0.75
HLA-C*07:02	XGBoost	T-test	11	0.75
	Bagging	T-test	11	0.55
	SVM	RF	13	0.55
	LR	T-test	18	0.75
	KNN	T-test	18	0.75
	NB	T-test	13	0.95
	Dtree	T-test	11	0.55
HLA-C*07:04	KNN	T-test	11	0.95
	LR	T-test	7	0.95
	XGBoost	W-test	15	0.95
	NB	T-test	5	0.75
	Bagging	LR_RFE	11	0.75
	SVM	W-test	17	0.95
	Dtree	W-test	11	0.95
HLA-C*08:02	KNN	LR_RFE	15	0.75
	XGBoost	T-test	12	0.55
	LR	RF	11	0.95
	SVM	W-test	6	0.55
	Bagging	T-test	12	0.55
	NB	W-test	6	0.55
	Dtree	LR_RFE	6	0.95
HLA-C*12:03	SVM	SVM_RFE	12	0.95
	NB	W-test	14	0.75
	KNN	W-test	12	0.95
	LR	T-test	14	0.75
	Bagging	RF	12	0.75
	Dtree	W-test	15	0.55
	XGBoost	T-test	6	0.75
HLA-C*14:02	XGBoost	LR_RFE	12	0.95

		Bagging	SVM_RFE	6	0.55
		LR	W-test	11	0.75
		SVM	T-test	7	0.95
		Dtree	T-test	13	0.55
		NB	T-test	9	0.95
		KNN	T-test	6	0.55
	HLA-C*15:02	NB	SVM_RFE	14	0.75
		KNN	T-test	5	0.75
		Dtree	T-test	7	0.95
		Bagging	SVM_RFE	9	0.55
		XGBoost	T-test	7	0.95
		LR	T-test	13	0.75
		SVM	T-test	5	0.95
	HLA-C*16:01	NB	SVM_RFE	10	0.75
		Dtree	SVM_RFE	13	0.55
		Bagging	SVM_RFE	13	0.55
		SVM	RF	9	0.75
		LR	T-test	9	0.95
		XGBoost	T-test	5	0.75
		KNN	RF	17	0.95
	HLA-C*17:01	KNN	SVM_RFE	9	0.75
		NB	SVM_RFE	7	0.55
		LR	T-test	11	0.95
		SVM	T-test	5	0.95
		Dtree	RF	8	0.95
		Bagging	RF	8	0.95
		XGBoost	T-test	7	0.95
10	HLA-A*01:01	KNN	T-test	10	0.55
		LR	W-test	13	0.95
		SVM	SVM_RFE	15	0.55
		NB	T-test	13	0.95
		Bagging	T-test	12	0.95
		XGBoost	T-test	13	0.55
		Dtree	RF	6	0.95
	HLA-A*02:01	SVM	T-test	14	0.95
		LR	SVM_RFE	18	0.55
		NB	T-test	13	0.95
		KNN	RF	6	0.75
		XGBoost	SVM_RFE	6	0.55
		Bagging	T-test	6	0.75
		Dtree	T-test	6	0.75
	HLA-A*02:02	NB	T-test	14	0.75
		SVM	SVM_RFE	6	0.75
		LR	T-test	18	0.75

	XGBoost	T-test	13	0.55
	KNN	RF	15	0.55
	Bagging	RF	9	0.95
	Dtree	W-test	11	0.55
HLA-A*02:03	NB	W-test	11	0.95
	LR	LR_RFE	15	0.55
	KNN	LR_RFE	14	0.75
	SVM	W-test	14	0.55
	XGBoost	T-test	12	0.55
	Bagging	T-test	11	0.95
	Dtree	T-test	10	0.95
HLA-A*02:04	SVM	RF	8	0.55
	Dtree	T-test	6	0.55
	Bagging	T-test	6	0.55
	XGBoost	T-test	6	0.55
	LR	T-test	5	0.95
	KNN	T-test	5	0.75
	NB	T-test	5	0.95
HLA-A*02:05	NB	LR_RFE	9	0.75
	SVM	T-test	14	0.75
	KNN	T-test	9	0.55
	Dtree	T-test	8	0.95
	Bagging	T-test	8	0.95
	XGBoost	T-test	8	0.95
	LR	T-test	7	0.95
HLA-A*02:06	KNN	SVM_RFE	9	0.55
	XGBoost	SVM_RFE	8	0.75
	SVM	SVM_RFE	12	0.75
	LR	LR_RFE	8	0.95
	Bagging	W-test	5	0.75
	NB	SVM_RFE	6	0.95
	Dtree	SVM_RFE	16	0.95
HLA-A*02:07	Bagging	SVM_RFE	12	0.95
	SVM	T-test	6	0.75
	NB	T-test	13	0.75
	Dtree	T-test	12	0.75
	XGBoost	T-test	8	0.95
	LR	T-test	7	0.95
	KNN	T-test	6	0.75
HLA-A*02:17	Dtree	LR_RFE	9	0.55
	XGBoost	LR_RFE	9	0.55
	Bagging	LR_RFE	6	0.75
	KNN	T-test	5	0.75
	LR	T-test	5	0.75

	NB	T-test	5	0.75
	SVM	T-test	5	0.75
HLA-A*03:01	KNN	RF	11	0.95
	XGBoost	LR_RFE	9	0.95
	SVM	T-test	9	0.75
	LR	SVM_RFE	11	0.75
	Bagging	T-test	11	0.95
	NB	T-test	12	0.55
	Dtree	SVM_RFE	14	0.55
HLA-A*11:01	XGBoost	SVM_RFE	7	0.55
	KNN	W-test	8	0.55
	NB	SVM_RFE	18	0.55
	LR	T-test	13	0.95
	SVM	W-test	6	0.75
	Bagging	T-test	8	0.75
	Dtree	SVM_RFE	13	0.95
HLA-A*23:01	NB	RF	13	0.95
	KNN	RF	7	0.55
	SVM	W-test	14	0.55
	Bagging	W-test	12	0.75
	XGBoost	W-test	12	0.75
	LR	W-test	12	0.55
	Dtree	T-test	11	0.75
HLA-A*24:02	KNN	SVM_RFE	9	0.55
	Bagging	T-test	15	0.75
	XGBoost	SVM_RFE	6	0.75
	LR	RF	14	0.95
	NB	T-test	13	0.95
	SVM	T-test	10	0.55
	Dtree	T-test	5	0.75
HLA-A*24:06	XGBoost	T-test	9	0.55
	Dtree	T-test	8	0.75
	LR	T-test	8	0.75
	Bagging	T-test	8	0.75
	KNN	T-test	8	0.75
	SVM	T-test	8	0.75
	NB	T-test	8	0.55
HLA-A*26:01	LR	LR_RFE	18	0.75
	NB	T-test	5	0.95
	Bagging	LR_RFE	8	0.75
	XGBoost	W-test	15	0.55
	KNN	T-test	6	0.55
	SVM	T-test	6	0.55
	Dtree	T-test	5	0.55

HLA-A*29:02	LR	LR_RFE	12	0.75
	NB	RF	13	0.75
	SVM	W-test	14	0.55
	KNN	LR_RFE	18	0.95
	XGBoost	RF	14	0.95
	Bagging	T-test	13	0.55
	Dtree	SVM_RFE	8	0.55
HLA-A*30:01	XGBoost	SVM_RFE	6	0.75
	KNN	W-test	12	0.75
	SVM	W-test	12	0.75
	Dtree	T-test	12	0.55
	Bagging	T-test	6	0.75
	NB	W-test	5	0.95
	LR	T-test	7	0.75
HLA-A*30:02	Dtree	SVM_RFE	7	0.55
	Bagging	T-test	12	0.55
	LR	T-test	8	0.75
	KNN	T-test	9	0.55
	XGBoost	T-test	9	0.95
	SVM	T-test	9	0.55
	NB	RF	18	0.95
HLA-A*31:01	XGBoost	LR_RFE	11	0.95
	KNN	SVM_RFE	14	0.55
	SVM	RF	17	0.75
	Bagging	SVM_RFE	17	0.95
	NB	RF	17	0.95
	LR	T-test	15	0.95
	Dtree	RF	10	0.95
HLA-A*32:01	SVM	LR_RFE	11	0.95
	NB	W-test	12	0.95
	LR	T-test	18	0.75
	XGBoost	T-test	10	0.95
	KNN	T-test	10	0.55
	Bagging	RF	11	0.75
	Dtree	RF	5	0.95
HLA-A*33:01	Dtree	LR_RFE	9	0.75
	LR	RF	18	0.95
	SVM	T-test	6	0.55
	KNN	T-test	10	0.95
	NB	T-test	8	0.75
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.55
HLA-A*68:01	LR	LR_RFE	17	0.55
	XGBoost	T-test	6	0.75

	KNN	SVM_RFE	12	0.55
	NB	T-test	7	0.75
	SVM	T-test	6	0.55
	Bagging	T-test	8	0.95
	Dtree	SVM_RFE	6	0.55
HLA-A*68:02	NB	LR_RFE	11	0.55
	XGBoost	W-test	8	0.55
	KNN	LR_RFE	8	0.75
	Bagging	W-test	8	0.95
	SVM	RF	5	0.75
	LR	T-test	10	0.95
	Dtree	SVM_RFE	7	0.95
HLA-A*69:01	SVM	T-test	5	0.75
	XGBoost	T-test	5	0.75
	KNN	T-test	5	0.75
	Bagging	T-test	5	0.75
	LR	T-test	5	0.75
	Dtree	T-test	5	0.75
	NB	T-test	5	0.95
HLA-B*07:02	LR	T-test	16	0.95
	NB	LR_RFE	8	0.95
	XGBoost	W-test	16	0.55
	SVM	LR_RFE	11	0.55
	Bagging	SVM_RFE	9	0.95
	KNN	T-test	8	0.55
	Dtree	SVM_RFE	9	0.95
HLA-B*08:01	XGBoost	SVM_RFE	13	0.75
	NB	SVM_RFE	7	0.55
	SVM	SVM_RFE	5	0.75
	KNN	RF	13	0.75
	Bagging	T-test	5	0.95
	Dtree	T-test	5	0.95
	LR	T-test	5	0.75
HLA-B*13:02	NB	T-test	8	0.55
	KNN	T-test	5	0.55
	Dtree	T-test	7	0.95
	XGBoost	T-test	7	0.95
	LR	T-test	7	0.75
	Bagging	T-test	6	0.75
	SVM	T-test	6	0.55
HLA-B*14:02	XGBoost	T-test	5	0.55
	Bagging	T-test	5	0.55
	Dtree	T-test	5	0.55
	SVM	T-test	5	0.75

	KNN	T-test	5	0.75
	LR	T-test	5	0.95
	NB	T-test	6	0.95
HLA-B*15:01	LR	SVM_RFE	18	0.55
	SVM	T-test	5	0.75
	Bagging	SVM_RFE	14	0.95
	XGBoost	SVM_RFE	14	0.75
	NB	T-test	6	0.75
	KNN	SVM_RFE	5	0.95
	Dtree	SVM_RFE	13	0.95
HLA-B*18:01	LR	LR_RFE	12	0.75
	XGBoost	T-test	7	0.75
	KNN	W-test	11	0.95
	SVM	W-test	11	0.95
	NB	T-test	10	0.55
	Bagging	T-test	7	0.75
	Dtree	T-test	7	0.75
HLA-B*27:01	LR	T-test	6	0.75
	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	KNN	T-test	5	0.95
	XGBoost	T-test	5	0.95
	SVM	T-test	5	0.95
	Dtree	T-test	5	0.75
HLA-B*27:02	LR	RF	16	0.95
	Bagging	RF	9	0.95
	XGBoost	T-test	7	0.95
	KNN	T-test	5	0.95
	NB	T-test	6	0.95
	Dtree	T-test	7	0.95
	SVM	T-test	5	0.95
HLA-B*27:03	KNN	T-test	5	0.75
	SVM	T-test	5	0.75
	LR	T-test	5	0.95
	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	XGBoost	T-test	5	0.95
	Dtree	T-test	5	0.95
HLA-B*27:04	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.55
	XGBoost	T-test	5	0.75
	NB	T-test	5	0.75
	Bagging	T-test	9	0.75

	Dtree	W-test	5	0.95
HLA-B*27:05	NB	SVM_RFE	11	0.95
	SVM	W-test	5	0.75
	LR	SVM_RFE	17	0.75
	KNN	T-test	10	0.55
	XGBoost	SVM_RFE	5	0.75
	Bagging	SVM_RFE	5	0.75
	Dtree	LR_RFE	5	0.95
HLA-B*27:06	Dtree	W-test	5	0.75
	XGBoost	W-test	5	0.75
	Bagging	T-test	6	0.95
	LR	T-test	5	0.95
	NB	T-test	5	0.95
	KNN	T-test	5	0.95
	SVM	T-test	5	0.95
HLA-B*27:07	LR	SVM_RFE	9	0.75
	SVM	T-test	5	0.75
	XGBoost	T-test	8	0.75
	Dtree	T-test	6	0.75
	Bagging	T-test	6	0.75
	NB	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-B*27:08	Dtree	SVM_RFE	7	0.95
	Bagging	T-test	13	0.95
	LR	T-test	6	0.75
	KNN	T-test	9	0.95
	XGBoost	T-test	10	0.55
	NB	W-test	5	0.95
	SVM	T-test	9	0.95
HLA-B*27:09	LR	RF	16	0.75
	KNN	W-test	18	0.55
	SVM	T-test	16	0.55
	NB	RF	15	0.95
	XGBoost	W-test	17	0.55
	Bagging	W-test	17	0.55
	Dtree	W-test	15	0.55
HLA-B*35:01	NB	LR_RFE	12	0.55
	SVM	T-test	7	0.55
	LR	T-test	17	0.75
	KNN	RF	11	0.75
	XGBoost	T-test	10	0.75
	Bagging	W-test	6	0.95
	Dtree	SVM_RFE	7	0.75
HLA-B*35:03	XGBoost	T-test	11	0.75

	Dtree	T-test	8	0.95
	Bagging	T-test	8	0.95
	NB	T-test	7	0.75
	LR	T-test	6	0.75
	SVM	T-test	6	0.75
	KNN	T-test	6	0.55
HLA-B*35:08	LR	T-test	14	0.55
	NB	T-test	14	0.55
	SVM	T-test	14	0.55
	KNN	T-test	13	0.75
	XGBoost	T-test	13	0.75
	Dtree	T-test	11	0.95
	Bagging	T-test	11	0.95
HLA-B*37:01	Bagging	SVM_RFE	9	0.55
	Dtree	SVM_RFE	9	0.55
	SVM	T-test	15	0.75
	NB	T-test	5	0.95
	KNN	T-test	14	0.75
	LR	T-test	13	0.55
	XGBoost	W-test	13	0.95
HLA-B*39:01	XGBoost	SVM_RFE	12	0.95
	Bagging	RF	18	0.95
	Dtree	T-test	12	0.95
	KNN	T-test	15	0.95
	SVM	T-test	11	0.75
	LR	T-test	11	0.55
	NB	T-test	11	0.55
HLA-B*40:01	XGBoost	SVM_RFE	13	0.75
	KNN	T-test	5	0.75
	Dtree	RF	17	0.55
	Bagging	RF	10	0.75
	LR	T-test	15	0.95
	SVM	T-test	5	0.75
	NB	T-test	12	0.75
HLA-B*40:02	SVM	RF	10	0.55
	LR	T-test	10	0.95
	KNN	RF	5	0.75
	NB	T-test	10	0.95
	XGBoost	T-test	8	0.95
	Bagging	LR_RFE	8	0.55
	Dtree	T-test	10	0.55
HLA-B*41:01	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.55

	XGBoost	T-test	5	0.75
	Bagging	T-test	5	0.75
	Dtree	T-test	5	0.75
	NB	T-test	8	0.55
HLA-B*44:02	LR	SVM_RFE	17	0.55
	KNN	SVM_RFE	14	0.55
	Bagging	RF	11	0.55
	XGBoost	SVM_RFE	17	0.75
	SVM	T-test	7	0.55
	NB	W-test	11	0.95
	Dtree	W-test	12	0.55
HLA-B*44:03	KNN	W-test	7	0.75
	LR	T-test	17	0.75
	NB	T-test	11	0.95
	XGBoost	W-test	9	0.95
	SVM	T-test	12	0.55
	Bagging	T-test	9	0.75
	Dtree	SVM_RFE	8	0.55
HLA-B*44:27	XGBoost	T-test	6	0.75
	Dtree	T-test	6	0.75
	SVM	T-test	7	0.75
	KNN	T-test	7	0.75
	NB	T-test	7	0.75
	LR	T-test	7	0.75
	Bagging	T-test	9	0.55
HLA-B*45:01	XGBoost	LR_RFE	14	0.55
	KNN	W-test	12	0.55
	LR	W-test	6	0.75
	SVM	T-test	9	0.55
	NB	W-test	11	0.75
	Bagging	T-test	8	0.55
	Dtree	RF	5	0.75
HLA-B*46:01	LR	SVM_RFE	17	0.55
	Dtree	SVM_RFE	12	0.75
	Bagging	SVM_RFE	12	0.55
	XGBoost	SVM_RFE	12	0.55
	KNN	W-test	14	0.55
	NB	W-test	10	0.55
	SVM	T-test	10	0.75
HLA-B*49:01	Dtree	SVM_RFE	10	0.75
	LR	T-test	11	0.75
	XGBoost	T-test	10	0.95
	NB	T-test	8	0.75
	KNN	T-test	7	0.95

	SVM	T-test	6	0.75
	Bagging	T-test	5	0.95
HLA-B*50:01	Dtree	RF	8	0.95
	XGBoost	T-test	13	0.75
	Bagging	T-test	9	0.95
	SVM	T-test	5	0.75
	KNN	T-test	5	0.75
	NB	T-test	5	0.95
	LR	T-test	5	0.75
HLA-B*51:01	NB	SVM_RFE	12	0.55
	LR	RF	14	0.55
	Bagging	RF	12	0.75
	KNN	RF	5	0.75
	SVM	T-test	11	0.95
	XGBoost	T-test	5	0.95
	Dtree	T-test	10	0.75
HLA-B*53:01	NB	T-test	11	0.55
	Bagging	T-test	5	0.75
	Dtree	T-test	8	0.75
	LR	T-test	8	0.55
	SVM	T-test	7	0.75
	KNN	T-test	7	0.55
	XGBoost	T-test	5	0.75
HLA-B*54:01	KNN	W-test	12	0.95
	NB	LR_RFE	9	0.75
	LR	SVM_RFE	9	0.95
	XGBoost	W-test	9	0.55
	SVM	T-test	12	0.75
	Dtree	LR_RFE	17	0.55
	Bagging	LR_RFE	17	0.75
HLA-B*56:01	Dtree	SVM_RFE	9	0.75
	SVM	RF	9	0.75
	KNN	T-test	16	0.95
	NB	T-test	11	0.95
	LR	T-test	10	0.75
	Bagging	T-test	10	0.75
	XGBoost	T-test	10	0.75
HLA-B*57:01	SVM	SVM_RFE	9	0.75
	NB	W-test	9	0.95
	KNN	T-test	10	0.75
	XGBoost	RF	15	0.95
	LR	T-test	11	0.95
	Bagging	T-test	13	0.55
	Dtree	W-test	6	0.75

HLA-B*57:03	KNN	W-test	10	0.55
	XGBoost	W-test	7	0.75
	LR	T-test	10	0.95
	NB	T-test	9	0.75
	SVM	T-test	5	0.75
	Bagging	T-test	11	0.55
	Dtree	W-test	7	0.75
HLA-B*58:01	KNN	SVM_RFE	7	0.75
	Bagging	T-test	5	0.95
	SVM	T-test	5	0.75
	XGBoost	RF	7	0.75
	LR	T-test	8	0.75
	NB	SVM_RFE	13	0.55
	Dtree	T-test	5	0.95
HLA-C*01:02	XGBoost	W-test	7	0.55
	Dtree	SVM_RFE	15	0.75
	NB	W-test	13	0.75
	SVM	T-test	13	0.55
	LR	T-test	13	0.95
	KNN	RF	17	0.95
	Bagging	T-test	7	0.95
HLA-C*02:02	LR	W-test	5	0.95
	KNN	W-test	5	0.95
	SVM	W-test	5	0.95
	NB	T-test	13	0.75
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.75
	Dtree	T-test	7	0.75
HLA-C*03:03	NB	T-test	11	0.75
	Bagging	W-test	10	0.55
	Dtree	SVM_RFE	16	0.95
	KNN	T-test	11	0.55
	SVM	T-test	5	0.95
	XGBoost	W-test	5	0.75
	LR	W-test	5	0.95
HLA-C*03:04	NB	T-test	17	0.95
	Dtree	T-test	12	0.75
	Bagging	T-test	12	0.75
	XGBoost	T-test	12	0.75
	LR	T-test	6	0.95
	KNN	T-test	6	0.95
	SVM	T-test	6	0.95
HLA-C*04:01	Bagging	SVM_RFE	16	0.55
	KNN	W-test	18	0.95

	NB	T-test	16	0.75
	SVM	W-test	17	0.55
	LR	SVM_RFE	18	0.55
	XGBoost	T-test	15	0.95
	Dtree	SVM_RFE	15	0.55
HLA-C*05:01	NB	SVM_RFE	13	0.95
	SVM	RF	12	0.95
	LR	SVM_RFE	9	0.95
	KNN	T-test	11	0.55
	XGBoost	SVM_RFE	7	0.95
	Bagging	SVM_RFE	9	0.75
	Dtree	SVM_RFE	10	0.55
HLA-C*06:02	XGBoost	W-test	8	0.75
	KNN	T-test	8	0.55
	LR	T-test	6	0.95
	Dtree	T-test	7	0.95
	Bagging	T-test	7	0.75
	NB	T-test	9	0.95
	SVM	T-test	11	0.95
HLA-C*07:01	Dtree	LR_RFE	11	0.55
	XGBoost	LR_RFE	7	0.55
	Bagging	LR_RFE	6	0.75
	LR	RF	14	0.75
	NB	W-test	6	0.95
	SVM	T-test	8	0.55
	KNN	T-test	7	0.95
HLA-C*07:02	Dtree	W-test	10	0.55
	Bagging	W-test	10	0.55
	XGBoost	W-test	10	0.55
	KNN	W-test	17	0.95
	NB	T-test	17	0.55
	LR	T-test	15	0.75
	SVM	T-test	15	0.55
HLA-C*07:04	NB	T-test	5	0.55
	XGBoost	RF	7	0.95
	Bagging	RF	7	0.95
	Dtree	RF	7	0.95
	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.95
HLA-C*08:02	Dtree	W-test	7	0.55
	LR	LR_RFE	9	0.95
	KNN	RF	9	0.55
	XGBoost	T-test	12	0.95

		Bagging	T-test	12	0.55
		SVM	T-test	6	0.55
		NB	T-test	5	0.75
	HLA-C*14:02	LR	W-test	10	0.75
		KNN	W-test	10	0.55
		SVM	W-test	10	0.55
		Bagging	T-test	8	0.95
		XGBoost	T-test	8	0.95
		Dtree	T-test	8	0.75
		NB	T-test	7	0.95
	HLA-C*16:01	NB	SVM_RFE	10	0.55
		XGBoost	T-test	15	0.95
		Bagging	T-test	11	0.95
		Dtree	T-test	10	0.75
		LR	T-test	8	0.55
		SVM	T-test	7	0.75
		KNN	T-test	6	0.95
11	HLA-A*01:01	XGBoost	W-test	9	0.75
		SVM	T-test	6	0.75
		NB	SVM_RFE	8	0.75
		KNN	T-test	7	0.75
		LR	T-test	7	0.75
		Bagging	SVM_RFE	7	0.75
		Dtree	T-test	5	0.95
	HLA-A*02:01	XGBoost	SVM_RFE	15	0.75
		LR	RF	16	0.95
		SVM	RF	7	0.55
		Bagging	RF	16	0.95
		NB	RF	14	0.95
		KNN	RF	5	0.75
		Dtree	W-test	5	0.75
	HLA-A*02:03	XGBoost	RF	12	0.75
		Dtree	W-test	7	0.75
		NB	T-test	10	0.75
		LR	T-test	10	0.55
		KNN	T-test	10	0.55
		SVM	T-test	8	0.95
		Bagging	T-test	6	0.55
	HLA-A*02:04	Dtree	T-test	8	0.55
		Bagging	T-test	8	0.55
		XGBoost	T-test	7	0.95
		LR	T-test	6	0.55
		NB	T-test	6	0.55
		KNN	T-test	6	0.55

	SVM	T-test	6	0.55
HLA-A*02:05	LR	T-test	5	0.75
	SVM	T-test	5	0.75
	Bagging	T-test	8	0.55
	KNN	T-test	8	0.55
	XGBoost	T-test	8	0.55
	NB	T-test	5	0.75
	Dtree	T-test	8	0.75
HLA-A*02:07	NB	LR_RFE	13	0.75
	Dtree	RF	18	0.75
	SVM	RF	13	0.55
	Bagging	T-test	12	0.75
	XGBoost	T-test	12	0.75
	KNN	T-test	10	0.95
	LR	T-test	7	0.75
HLA-A*03:01	KNN	LR_RFE	18	0.95
	Dtree	SVM_RFE	6	0.75
	XGBoost	T-test	12	0.55
	NB	T-test	5	0.75
	Bagging	LR_RFE	9	0.75
	LR	T-test	11	0.75
	SVM	T-test	5	0.55
HLA-A*11:01	NB	W-test	16	0.55
	Bagging	T-test	6	0.75
	LR	T-test	13	0.55
	Dtree	T-test	6	0.75
	KNN	T-test	12	0.75
	XGBoost	T-test	5	0.95
	SVM	T-test	5	0.75
HLA-A*23:01	NB	LR_RFE	7	0.55
	Dtree	RF	6	0.55
	Bagging	RF	6	0.55
	XGBoost	T-test	5	0.95
	LR	T-test	6	0.55
	KNN	T-test	6	0.55
	SVM	T-test	6	0.55
HLA-A*24:02	Bagging	W-test	10	0.55
	KNN	W-test	10	0.75
	XGBoost	W-test	9	0.55
	LR	T-test	11	0.75
	NB	T-test	7	0.95
	SVM	T-test	7	0.75
	Dtree	T-test	8	0.95
HLA-A*24:06	Dtree	T-test	8	0.95

	SVM	T-test	5	0.95
	LR	T-test	5	0.95
	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	KNN	T-test	5	0.95
	XGBoost	T-test	5	0.95
HLA-A*29:02	Dtree	LR_RFE	5	0.95
	KNN	RF	8	0.55
	LR	RF	7	0.75
	SVM	W-test	10	0.55
	NB	T-test	13	0.95
	XGBoost	T-test	11	0.75
	Bagging	T-test	9	0.55
HLA-A*31:01	NB	RF	6	0.75
	KNN	W-test	17	0.75
	Dtree	T-test	15	0.95
	Bagging	T-test	15	0.95
	XGBoost	T-test	15	0.95
	SVM	T-test	14	0.55
	LR	T-test	9	0.95
HLA-A*32:01	XGBoost	RF	5	0.75
	Bagging	RF	5	0.75
	SVM	W-test	8	0.75
	Dtree	T-test	18	0.95
	KNN	T-test	15	0.95
	LR	T-test	6	0.55
	NB	T-test	9	0.55
HLA-A*68:01	Dtree	SVM_RFE	11	0.75
	XGBoost	SVM_RFE	11	0.95
	NB	T-test	10	0.95
	LR	T-test	6	0.95
	Bagging	T-test	6	0.55
	KNN	T-test	6	0.55
	SVM	T-test	6	0.55
HLA-A*68:02	KNN	T-test	17	0.75
	Bagging	T-test	8	0.95
	XGBoost	T-test	6	0.75
	Dtree	RF	9	0.95
	NB	T-test	7	0.95
	LR	T-test	6	0.95
	SVM	T-test	6	0.95
HLA-B*07:02	LR	SVM_RFE	18	0.95
	NB	SVM_RFE	17	0.95
	KNN	SVM_RFE	15	0.55

	SVM	RF	17	0.95
	Bagging	SVM_RFE	17	0.75
	XGBoost	SVM_RFE	15	0.95
	Dtree	SVM_RFE	6	0.55
HLA-B*08:01	Dtree	T-test	5	0.55
	XGBoost	T-test	11	0.75
	Bagging	T-test	11	0.75
	SVM	T-test	12	0.55
	KNN	T-test	12	0.75
	LR	W-test	6	0.95
	NB	W-test	7	0.55
HLA-B*15:01	SVM	T-test	17	0.75
	NB	SVM_RFE	15	0.75
	LR	RF	13	0.75
	Bagging	RF	12	0.55
	KNN	RF	12	0.55
	XGBoost	W-test	14	0.75
	Dtree	T-test	14	0.75
HLA-B*27:01	Dtree	SVM_RFE	14	0.95
	NB	W-test	17	0.95
	Bagging	T-test	11	0.95
	XGBoost	T-test	11	0.95
	SVM	T-test	10	0.75
	LR	T-test	10	0.55
	KNN	T-test	9	0.75
HLA-B*27:02	Bagging	T-test	5	0.95
	KNN	LR_RFE	12	0.55
	Dtree	W-test	11	0.55
	LR	T-test	12	0.75
	NB	T-test	8	0.55
	SVM	T-test	8	0.55
	XGBoost	T-test	6	0.55
HLA-B*27:03	SVM	T-test	5	0.75
	KNN	T-test	5	0.75
	LR	T-test	5	0.75
	XGBoost	T-test	6	0.95
	NB	T-test	6	0.95
	Bagging	T-test	6	0.95
	Dtree	T-test	6	0.95
HLA-B*27:04	Dtree	T-test	8	0.55
	LR	T-test	6	0.55
	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	SVM	T-test	5	0.75

	XGBoost	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-B*27:05	NB	LR_RFE	18	0.75
	SVM	W-test	15	0.55
	LR	SVM_RFE	5	0.95
	KNN	SVM_RFE	14	0.95
	XGBoost	RF	10	0.55
	Bagging	LR_RFE	5	0.95
	Dtree	LR_RFE	15	0.95
HLA-B*27:06	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	Bagging	T-test	5	0.55
	LR	T-test	5	0.55
	Dtree	T-test	5	0.55
	XGBoost	T-test	7	0.55
HLA-B*27:07	Bagging	RF	10	0.95
	Dtree	RF	10	0.95
	LR	T-test	6	0.55
	XGBoost	T-test	15	0.75
	KNN	T-test	8	0.75
	NB	T-test	6	0.95
	SVM	T-test	6	0.75
HLA-B*27:08	Dtree	W-test	11	0.55
	Bagging	T-test	6	0.55
	XGBoost	T-test	6	0.55
	SVM	W-test	10	0.55
	LR	T-test	13	0.55
	NB	T-test	12	0.95
	KNN	T-test	5	0.75
HLA-B*27:09	Bagging	LR_RFE	6	0.95
	XGBoost	SVM_RFE	10	0.75
	LR	SVM_RFE	17	0.95
	SVM	W-test	18	0.95
	Dtree	LR_RFE	13	0.55
	NB	T-test	10	0.95
	KNN	T-test	9	0.55
HLA-B*35:01	KNN	SVM_RFE	16	0.75
	XGBoost	W-test	6	0.75
	Bagging	SVM_RFE	8	0.75
	Dtree	SVM_RFE	6	0.95
	LR	T-test	11	0.75
	NB	T-test	14	0.55
	SVM	T-test	15	0.55

HLA-B*35:03	XGBoost	SVM_RFE	10	0.75
	Dtree	W-test	14	0.55
	Bagging	T-test	16	0.75
	LR	T-test	6	0.55
	NB	T-test	6	0.55
	SVM	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-B*35:08	XGBoost	RF	9	0.55
	Bagging	RF	9	0.55
	Dtree	RF	9	0.55
	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	LR	T-test	5	0.55
HLA-B*37:01	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	Bagging	T-test	5	0.55
	LR	T-test	5	0.55
	Dtree	T-test	5	0.55
HLA-B*39:01	KNN	T-test	5	0.75
	SVM	T-test	5	0.75
	Dtree	T-test	5	0.95
	XGBoost	T-test	5	0.95
	LR	T-test	5	0.75
	NB	T-test	5	0.75
	Bagging	T-test	6	0.75
HLA-B*40:01	Dtree	SVM_RFE	7	0.95
	Bagging	SVM_RFE	7	0.95
	SVM	W-test	5	0.75
	LR	T-test	11	0.75
	NB	T-test	10	0.55
	KNN	T-test	8	0.55
	XGBoost	T-test	5	0.75
HLA-B*40:02	Bagging	LR_RFE	10	0.95
	XGBoost	SVM_RFE	11	0.95
	NB	T-test	8	0.95
	Dtree	SVM_RFE	11	0.95
	LR	T-test	11	0.95
	KNN	T-test	17	0.75
	SVM	T-test	5	0.95
HLA-B*44:02	LR	RF	10	0.55
	Dtree	T-test	9	0.75

	Bagging	T-test	9	0.75
	XGBoost	T-test	9	0.75
	NB	T-test	8	0.95
	SVM	T-test	5	0.95
	KNN	T-test	5	0.95
HLA-B*44:03	Dtree	LR_RFE	14	0.95
	Bagging	SVM_RFE	13	0.95
	NB	SVM_RFE	7	0.95
	XGBoost	RF	14	0.95
	SVM	W-test	6	0.75
	LR	T-test	17	0.75
	KNN	T-test	12	0.95
HLA-B*45:01	Dtree	LR_RFE	11	0.55
	NB	W-test	7	0.55
	XGBoost	LR_RFE	14	0.75
	LR	SVM_RFE	5	0.55
	SVM	SVM_RFE	5	0.55
	Bagging	T-test	13	0.55
	KNN	T-test	13	0.55
HLA-B*46:01	NB	T-test	5	0.75
	KNN	SVM_RFE	10	0.95
	LR	T-test	5	0.75
	XGBoost	T-test	5	0.95
	Bagging	T-test	5	0.95
	Dtree	T-test	5	0.95
	SVM	T-test	8	0.55
HLA-B*49:01	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	Bagging	T-test	5	0.55
	Dtree	T-test	5	0.55
	NB	T-test	5	0.75
	LR	T-test	5	0.75
HLA-B*51:01	SVM	RF	11	0.95
	NB	RF	9	0.95
	LR	T-test	14	0.55
	KNN	T-test	8	0.55
	Dtree	RF	6	0.95
	Bagging	T-test	14	0.75
	XGBoost	T-test	6	0.75
HLA-B*54:01	SVM	RF	17	0.95
	NB	RF	10	0.95
	KNN	RF	10	0.95
	Dtree	RF	6	0.95

	LR	T-test	9	0.75
	Bagging	T-test	9	0.55
	XGBoost	T-test	9	0.55
HLA-B*56:01	XGBoost	T-test	8	0.55
	KNN	SVM_RFE	9	0.55
	SVM	T-test	5	0.55
	NB	SVM_RFE	5	0.75
	Dtree	T-test	8	0.55
	Bagging	T-test	8	0.55
	LR	SVM_RFE	9	0.55
HLA-B*57:01	LR	RF	11	0.95
	KNN	T-test	13	0.75
	SVM	RF	16	0.75
	NB	T-test	12	0.75
	Bagging	LR_RFE	16	0.95
	XGBoost	RF	12	0.55
	Dtree	SVM_RFE	11	0.55
HLA-B*57:03	NB	W-test	13	0.75
	LR	W-test	12	0.55
	XGBoost	T-test	14	0.75
	Dtree	W-test	13	0.95
	KNN	T-test	5	0.75
	SVM	T-test	12	0.55
	Bagging	T-test	12	0.75
HLA-B*58:01	KNN	LR_RFE	7	0.95
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.95
	SVM	T-test	6	0.75
	NB	T-test	6	0.95
	LR	T-test	6	0.95
	Dtree	T-test	7	0.55
HLA-C*01:02	Bagging	T-test	5	0.95
	LR	T-test	5	0.95
	NB	T-test	5	0.95
	XGBoost	T-test	5	0.95
	Dtree	T-test	5	0.75
	SVM	T-test	5	0.75
	KNN	T-test	5	0.75
HLA-C*02:02	XGBoost	T-test	5	0.75
	KNN	T-test	5	0.75
	Bagging	T-test	5	0.75
	LR	T-test	5	0.75
	Dtree	T-test	5	0.75
	SVM	T-test	5	0.95

	NB	T-test	5	0.95
HLA-C*03:03	KNN	SVM_RFE	12	0.55
	NB	W-test	5	0.55
	XGBoost	T-test	10	0.55
	Dtree	T-test	8	0.55
	Bagging	T-test	7	0.75
	SVM	T-test	6	0.75
	LR	T-test	6	0.75
HLA-C*03:04	XGBoost	T-test	13	0.55
	KNN	W-test	5	0.55
	Bagging	W-test	5	0.55
	Dtree	W-test	5	0.55
	SVM	T-test	5	0.55
	NB	T-test	5	0.55
	LR	T-test	5	0.95
HLA-C*04:01	KNN	SVM_RFE	17	0.75
	XGBoost	T-test	8	0.95
	NB	SVM_RFE	13	0.75
	Dtree	SVM_RFE	9	0.95
	Bagging	SVM_RFE	9	0.75
	SVM	RF	11	0.95
	LR	T-test	6	0.75
HLA-C*05:01	Dtree	SVM_RFE	7	0.55
	Bagging	RF	7	0.95
	NB	T-test	10	0.75
	XGBoost	T-test	7	0.75
	LR	T-test	6	0.95
	SVM	T-test	6	0.95
	KNN	T-test	5	0.95
HLA-C*06:02	XGBoost	SVM_RFE	13	0.75
	Dtree	W-test	7	0.95
	Bagging	T-test	13	0.55
	KNN	W-test	12	0.75
	NB	T-test	12	0.95
	SVM	T-test	12	0.95
	LR	T-test	10	0.55
HLA-C*07:01	NB	RF	16	0.55
	Dtree	RF	12	0.75
	KNN	W-test	5	0.55
	SVM	W-test	5	0.55
	Bagging	T-test	14	0.95
	XGBoost	T-test	14	0.95
	LR	T-test	14	0.55
HLA-C*07:02	LR	RF	5	0.75

		SVM	W-test	14	0.55
		XGBoost	T-test	18	0.95
		NB	T-test	14	0.75
		Dtree	T-test	8	0.95
		Bagging	T-test	5	0.75
		KNN	T-test	5	0.55
	HLA-C*08:02	Bagging	SVM_RFE	5	0.95
		Dtree	RF	15	0.75
		SVM	W-test	5	0.75
		XGBoost	RF	15	0.75
		LR	W-test	5	0.75
		NB	T-test	5	0.75
		KNN	T-test	5	0.55
	HLA-C*16:01	Dtree	T-test	7	0.55
		LR	T-test	7	0.55
		Bagging	T-test	7	0.55
		NB	T-test	7	0.55
		KNN	T-test	7	0.55
		XGBoost	T-test	7	0.55
		SVM	T-test	7	0.55
12	HLA-A*01:01	XGBoost	SVM_RFE	15	0.95
		NB	W-test	12	0.55
		Bagging	SVM_RFE	18	0.95
		Dtree	T-test	14	0.75
		KNN	T-test	10	0.95
		SVM	LR_RFE	6	0.75
		LR	T-test	5	0.95
	HLA-A*02:01	KNN	RF	10	0.75
		SVM	W-test	18	0.95
		LR	W-test	14	0.75
		NB	T-test	17	0.95
		XGBoost	T-test	11	0.95
		Bagging	T-test	11	0.95
		Dtree	LR_RFE	7	0.55
	HLA-A*03:01	Bagging	W-test	9	0.75
		NB	T-test	8	0.95
		KNN	T-test	7	0.75
		XGBoost	T-test	8	0.55
		LR	T-test	6	0.95
		SVM	T-test	6	0.75
		Dtree	W-test	6	0.55
	HLA-A*11:01	LR	LR_RFE	5	0.55
		Dtree	W-test	6	0.55
		XGBoost	W-test	6	0.55

	NB	W-test	6	0.75
	KNN	T-test	5	0.75
	Bagging	T-test	5	0.75
	SVM	T-test	6	0.75
HLA-A*24:02	Bagging	T-test	11	0.75
	XGBoost	T-test	11	0.75
	Dtree	T-test	11	0.55
	NB	T-test	7	0.75
	SVM	T-test	5	0.75
	LR	T-test	6	0.75
	KNN	T-test	5	0.75
HLA-A*29:02	NB	T-test	6	0.75
	LR	T-test	6	0.75
	SVM	T-test	8	0.55
	KNN	T-test	8	0.55
	Bagging	T-test	9	0.95
	XGBoost	T-test	10	0.75
	Dtree	T-test	11	0.75
HLA-A*31:01	Dtree	RF	9	0.75
	XGBoost	W-test	13	0.75
	Bagging	W-test	13	0.75
	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.75
	LR	T-test	5	0.75
HLA-A*68:01	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	LR	T-test	5	0.55
	Dtree	T-test	5	0.55
	Bagging	T-test	5	0.75
	XGBoost	T-test	7	0.55
HLA-A*68:02	LR	W-test	17	0.75
	XGBoost	W-test	12	0.75
	Dtree	W-test	8	0.75
	Bagging	W-test	8	0.75
	NB	T-test	10	0.95
	SVM	T-test	5	0.75
	KNN	T-test	10	0.95
HLA-B*07:02	LR	T-test	7	0.95
	SVM	T-test	6	0.55
	KNN	T-test	6	0.55
	XGBoost	T-test	7	0.55
	Bagging	T-test	13	0.95

	NB	T-test	13	0.95
	Dtree	W-test	16	0.75
HLA-B*08:01	XGBoost	W-test	15	0.95
	Dtree	T-test	13	0.95
	Bagging	T-test	13	0.95
	KNN	T-test	13	0.75
	SVM	T-test	13	0.75
	LR	T-test	13	0.55
	NB	T-test	11	0.95
HLA-B*15:01	XGBoost	LR_RFE	5	0.95
	Dtree	SVM_RFE	6	0.75
	Bagging	W-test	8	0.95
	SVM	T-test	5	0.75
	KNN	T-test	5	0.75
	LR	T-test	6	0.75
	NB	T-test	6	0.75
HLA-B*27:01	KNN	T-test	5	0.75
	SVM	T-test	5	0.75
	Bagging	T-test	6	0.95
	XGBoost	T-test	6	0.95
	NB	T-test	5	0.95
	LR	T-test	5	0.75
	Dtree	T-test	6	0.95
HLA-B*27:02	Dtree	W-test	6	0.55
	KNN	W-test	6	0.55
	NB	T-test	10	0.75
	XGBoost	T-test	10	0.75
	LR	T-test	8	0.75
	Bagging	T-test	8	0.55
	SVM	T-test	8	0.55
HLA-B*27:03	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	NB	T-test	5	0.55
	LR	T-test	5	0.55
	XGBoost	T-test	6	0.55
	Bagging	T-test	6	0.55
	Dtree	T-test	6	0.55
HLA-B*27:05	SVM	SVM_RFE	13	0.55
	NB	LR_RFE	11	0.75
	KNN	W-test	12	0.75
	LR	SVM_RFE	10	0.75
	XGBoost	SVM_RFE	14	0.95
	Bagging	LR_RFE	12	0.75
	Dtree	SVM_RFE	9	0.55

HLA-B*27:07	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	Bagging	T-test	5	0.55
	Dtree	T-test	5	0.55
	LR	T-test	5	0.75
	NB	T-test	5	0.95
HLA-B*27:08	SVM	T-test	5	0.55
	LR	T-test	5	0.55
	KNN	T-test	5	0.75
	NB	T-test	5	0.75
	XGBoost	T-test	6	0.95
	Dtree	T-test	6	0.95
	Bagging	T-test	13	0.75
HLA-B*27:09	LR	LR_RFE	5	0.75
	NB	RF	13	0.95
	SVM	W-test	11	0.75
	Bagging	T-test	13	0.95
	XGBoost	T-test	13	0.95
	Dtree	RF	14	0.75
	KNN	T-test	7	0.95
HLA-B*35:01	KNN	T-test	18	0.55
	Bagging	T-test	14	0.55
	LR	T-test	14	0.95
	Dtree	T-test	14	0.75
	NB	T-test	14	0.75
	SVM	T-test	14	0.55
	XGBoost	T-test	8	0.95
HLA-B*40:01	KNN	T-test	5	0.95
	Bagging	T-test	5	0.95
	SVM	T-test	6	0.75
	XGBoost	T-test	6	0.75
	NB	T-test	6	0.75
	LR	T-test	6	0.75
	Dtree	T-test	11	0.55
HLA-B*40:02	Dtree	W-test	13	0.95
	NB	T-test	15	0.55
	SVM	T-test	15	0.55
	LR	T-test	13	0.75
	KNN	T-test	13	0.75
	XGBoost	T-test	13	0.75
	Bagging	T-test	11	0.95
HLA-B*44:02	Dtree	T-test	10	0.55
	Bagging	T-test	9	0.95

	XGBoost	T-test	9	0.95
	LR	LR_RFE	15	0.95
	SVM	LR_RFE	15	0.75
	NB	RF	5	0.75
	KNN	T-test	6	0.95
HLA-B*44:03	Dtree	W-test	9	0.55
	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.55
	XGBoost	T-test	5	0.95
	NB	T-test	5	0.95
	Bagging	T-test	5	0.95
HLA-B*51:01	Dtree	RF	8	0.75
	Bagging	T-test	14	0.55
	LR	T-test	9	0.55
	NB	T-test	9	0.55
	KNN	T-test	9	0.55
	SVM	T-test	9	0.55
	XGBoost	T-test	7	0.95
HLA-B*57:01	LR	RF	12	0.75
	NB	T-test	12	0.95
	XGBoost	SVM_RFE	12	0.75
	SVM	T-test	6	0.75
	Bagging	SVM_RFE	12	0.55
	KNN	T-test	14	0.75
	Dtree	T-test	14	0.95
HLA-B*57:03	XGBoost	T-test	5	0.55
	Bagging	T-test	5	0.55
	Dtree	T-test	5	0.55
	LR	T-test	5	0.75
	NB	T-test	5	0.95
	SVM	T-test	5	0.55
	KNN	T-test	5	0.55
HLA-B*58:01	Bagging	SVM_RFE	5	0.95
	XGBoost	SVM_RFE	17	0.95
	Dtree	RF	7	0.75
	NB	T-test	9	0.95
	KNN	T-test	7	0.75
	SVM	T-test	7	0.75
	LR	T-test	5	0.75
HLA-C*01:02	Bagging	W-test	10	0.95
	XGBoost	W-test	10	0.95
	NB	W-test	10	0.75
	LR	W-test	9	0.95

		SVM	W-test	7	0.55
		KNN	T-test	9	0.75
		Dtree	T-test	6	0.95
	HLA-C*04:01	Bagging	RF	9	0.75
		LR	T-test	6	0.75
		SVM	T-test	15	0.55
		KNN	T-test	14	0.55
		Dtree	T-test	13	0.75
		XGBoost	T-test	13	0.75
		NB	T-test	12	0.95
	HLA-C*05:01	XGBoost	W-test	14	0.55
		Bagging	W-test	12	0.95
		Dtree	T-test	12	0.95
		NB	T-test	6	0.95
		SVM	T-test	10	0.95
		KNN	T-test	10	0.55
		LR	T-test	9	0.55
	HLA-C*06:02	Dtree	RF	8	0.55
		SVM	T-test	5	0.55
		KNN	T-test	5	0.55
		LR	T-test	5	0.75
		XGBoost	T-test	6	0.55
		NB	T-test	6	0.55
		Bagging	T-test	6	0.55
	HLA-C*07:01	Dtree	W-test	9	0.95
		Bagging	W-test	12	0.95
		NB	T-test	13	0.55
		LR	T-test	7	0.95
		KNN	T-test	7	0.75
		SVM	T-test	7	0.75
		XGBoost	T-test	6	0.75
13	HLA-A*01:01	SVM	T-test	15	0.95
		Bagging	T-test	13	0.75
		NB	W-test	16	0.75
		KNN	W-test	12	0.95
		Dtree	T-test	13	0.75
		XGBoost	T-test	6	0.95
		LR	T-test	11	0.75
	HLA-A*02:01	XGBoost	RF	10	0.75
		KNN	W-test	16	0.75
		Bagging	SVM_RFE	7	0.55
		SVM	T-test	9	0.75
		LR	T-test	8	0.75
		NB	T-test	7	0.95

	Dtree	T-test	9	0.95
HLA-A*03:01	LR	T-test	5	0.55
	XGBoost	T-test	5	0.75
	Bagging	T-test	5	0.75
	Dtree	T-test	5	0.75
	SVM	T-test	5	0.95
	KNN	T-test	5	0.95
	NB	T-test	8	0.55
HLA-A*11:01	SVM	T-test	5	0.55
	KNN	T-test	5	0.75
	Bagging	SVM_RFE	7	0.75
	XGBoost	SVM_RFE	5	0.75
	NB	RF	15	0.95
	LR	T-test	5	0.95
	Dtree	SVM_RFE	7	0.75
HLA-A*24:02	Bagging	LR_RFE	9	0.75
	LR	SVM_RFE	14	0.75
	NB	RF	18	0.75
	Dtree	RF	7	0.95
	XGBoost	T-test	14	0.55
	SVM	T-test	13	0.95
	KNN	T-test	13	0.55
HLA-A*29:02	SVM	LR_RFE	8	0.75
	Dtree	SVM_RFE	10	0.95
	Bagging	W-test	14	0.95
	XGBoost	W-test	14	0.95
	LR	T-test	14	0.75
	NB	T-test	7	0.95
	KNN	T-test	6	0.75
HLA-A*31:01	Bagging	SVM_RFE	15	0.75
	XGBoost	RF	15	0.75
	SVM	W-test	18	0.55
	Dtree	W-test	6	0.95
	LR	T-test	13	0.55
	KNN	T-test	13	0.55
	NB	T-test	12	0.55
HLA-A*68:02	NB	SVM_RFE	11	0.95
	SVM	T-test	13	0.75
	Dtree	LR_RFE	7	0.55
	Bagging	LR_RFE	7	0.55
	XGBoost	LR_RFE	7	0.55
	LR	T-test	7	0.55
	KNN	W-test	8	0.75
HLA-B*07:02	Bagging	RF	16	0.95

	XGBoost	RF	16	0.95
	NB	W-test	16	0.95
	Dtree	W-test	16	0.55
	LR	T-test	17	0.55
	KNN	T-test	17	0.55
	SVM	T-test	17	0.55
HLA-B*15:01	Dtree	SVM_RFE	14	0.55
	Bagging	W-test	17	0.95
	LR	T-test	12	0.55
	XGBoost	T-test	11	0.75
	SVM	T-test	7	0.75
	KNN	T-test	14	0.55
	NB	W-test	7	0.75
HLA-B*27:01	KNN	T-test	5	0.75
	SVM	T-test	5	0.75
	Bagging	T-test	5	0.95
	NB	T-test	5	0.95
	XGBoost	T-test	5	0.95
	LR	T-test	5	0.75
	Dtree	T-test	5	0.95
HLA-B*27:02	Bagging	T-test	9	0.55
	XGBoost	T-test	8	0.75
	Dtree	T-test	8	0.55
	NB	T-test	8	0.55
	KNN	T-test	8	0.55
	SVM	T-test	8	0.55
	LR	T-test	7	0.55
HLA-B*27:05	LR	T-test	16	0.95
	NB	LR_RFE	17	0.55
	Bagging	LR_RFE	14	0.55
	Dtree	LR_RFE	14	0.55
	SVM	W-test	18	0.75
	XGBoost	LR_RFE	17	0.55
	KNN	RF	18	0.55
HLA-B*27:08	Bagging	W-test	6	0.75
	NB	SVM_RFE	11	0.75
	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.55
	Dtree	T-test	5	0.55
HLA-B*27:09	Bagging	SVM_RFE	7	0.75
	LR	LR_RFE	18	0.95
	XGBoost	LR_RFE	13	0.95

	Dtree	RF	15	0.75
	SVM	T-test	5	0.75
	NB	T-test	6	0.75
	KNN	RF	13	0.95
HLA-B*35:01	SVM	SVM_RFE	15	0.95
	LR	RF	8	0.75
	XGBoost	W-test	5	0.75
	Dtree	W-test	5	0.55
	NB	T-test	6	0.95
	Bagging	T-test	7	0.75
	KNN	T-test	5	0.55
HLA-B*44:02	XGBoost	W-test	11	0.55
	Dtree	T-test	17	0.75
	Bagging	T-test	17	0.55
	NB	T-test	8	0.55
	KNN	T-test	6	0.55
	LR	T-test	6	0.55
	SVM	T-test	6	0.55
HLA-B*51:01	XGBoost	RF	11	0.55
	Dtree	W-test	5	0.55
	Bagging	W-test	5	0.55
	LR	T-test	14	0.55
	NB	T-test	11	0.75
	KNN	T-test	8	0.55
	SVM	T-test	8	0.55
HLA-B*57:01	Bagging	SVM_RFE	9	0.55
	XGBoost	W-test	13	0.55
	Dtree	W-test	10	0.75
	KNN	T-test	12	0.55
	SVM	T-test	12	0.55
	NB	T-test	10	0.75
	LR	T-test	8	0.75
HLA-B*57:03	Dtree	SVM_RFE	11	0.75
	NB	SVM_RFE	7	0.55
	Bagging	RF	7	0.95
	XGBoost	W-test	12	0.95
	LR	T-test	16	0.95
	KNN	T-test	8	0.75
	SVM	T-test	8	0.75
HLA-B*58:01	NB	RF	18	0.75
	SVM	T-test	5	0.55
	XGBoost	T-test	5	0.55
	KNN	T-test	5	0.55
	LR	T-test	5	0.55

		Bagging	T-test	5	0.75
		Dtree	T-test	5	0.95
	HLA-C*04:01	Bagging	W-test	9	0.95
		Dtree	W-test	6	0.55
		XGBoost	W-test	6	0.55
		NB	T-test	5	0.55
		KNN	T-test	6	0.95
		SVM	T-test	6	0.55
		LR	T-test	6	0.55
	HLA-C*05:01	Bagging	W-test	17	0.55
		XGBoost	T-test	5	0.95
		KNN	T-test	7	0.55
		SVM	T-test	7	0.55
		LR	T-test	6	0.75
		NB	T-test	6	0.75
		Dtree	T-test	5	0.95
	HLA-C*06:02	NB	LR_RFE	5	0.55
		Dtree	RF	7	0.55
		XGBoost	W-test	6	0.75
		Bagging	T-test	10	0.75
		LR	T-test	15	0.75
		KNN	T-test	15	0.75
		SVM	T-test	11	0.75
14	HLA-A*01:01	Bagging	T-test	12	0.75
		Dtree	T-test	12	0.95
		XGBoost	T-test	6	0.95
		KNN	T-test	5	0.55
		LR	T-test	6	0.75
		SVM	T-test	5	0.75
		NB	T-test	6	0.75
	HLA-A*02:01	XGBoost	T-test	7	0.75
		Dtree	T-test	9	0.55
		Bagging	T-test	9	0.55
		NB	T-test	9	0.55
		LR	T-test	7	0.75
		KNN	T-test	7	0.75
		SVM	T-test	7	0.75
	HLA-A*24:02	Bagging	T-test	10	0.55
		Dtree	T-test	10	0.55
		SVM	T-test	5	0.55
		XGBoost	T-test	5	0.55
		KNN	T-test	5	0.55
		NB	T-test	5	0.55
		LR	T-test	5	0.55

HLA-A*68:02	KNN	W-test	10	0.75
	XGBoost	W-test	8	0.95
	SVM	T-test	18	0.55
	Bagging	T-test	16	0.75
	LR	T-test	9	0.95
	NB	T-test	9	0.95
	Dtree	T-test	8	0.95
HLA-B*07:02	NB	RF	12	0.55
	Dtree	W-test	15	0.75
	KNN	W-test	15	0.55
	LR	T-test	16	0.75
	SVM	T-test	16	0.75
	Bagging	T-test	7	0.75
	XGBoost	T-test	7	0.75
HLA-B*15:01	Bagging	SVM_RFE	15	0.95
	KNN	RF	9	0.55
	SVM	T-test	8	0.55
	XGBoost	W-test	10	0.75
	Dtree	W-test	9	0.95
	LR	T-test	7	0.55
	NB	T-test	8	0.75
HLA-B*27:05	SVM	SVM_RFE	9	0.55
	NB	LR_RFE	11	0.95
	KNN	SVM_RFE	9	0.55
	LR	RF	16	0.95
	XGBoost	SVM_RFE	8	0.75
	Bagging	LR_RFE	16	0.95
	Dtree	LR_RFE	16	0.95
HLA-B*27:09	Bagging	W-test	10	0.95
	Dtree	W-test	10	0.75
	NB	T-test	7	0.55
	SVM	T-test	5	0.95
	LR	T-test	5	0.95
	XGBoost	T-test	5	0.95
	KNN	T-test	5	0.95
HLA-B*35:01	Bagging	SVM_RFE	7	0.95
	Dtree	RF	5	0.55
	SVM	T-test	5	0.95
	LR	T-test	6	0.55
	NB	T-test	6	0.55
	XGBoost	T-test	6	0.55
	KNN	T-test	5	0.95
HLA-B*57:01	Bagging	SVM_RFE	8	0.75
	KNN	LR_RFE	16	0.75

	XGBoost	LR_RFE	16	0.55
	Dtree	SVM_RFE	8	0.75
	NB	RF	10	0.55
	LR	W-test	8	0.55
	SVM	W-test	8	0.55
HLA-C*04:01	Dtree	SVM_RFE	16	0.95
	Bagging	SVM_RFE	18	0.55
	KNN	T-test	14	0.75
	XGBoost	SVM_RFE	16	0.75
	NB	T-test	5	0.55
	SVM	T-test	5	0.75
	LR	T-test	5	0.75
HLA-C*05:01	Dtree	RF	5	0.55
	XGBoost	RF	5	0.55
	SVM	RF	5	0.55
	Bagging	RF	5	0.55
	KNN	RF	5	0.55
	NB	SVM_RFE	12	0.75
	LR	T-test	15	0.95
HLA-C*06:02	Dtree	RF	6	0.95
	Bagging	W-test	9	0.55
	XGBoost	W-test	9	0.55
	NB	T-test	14	0.55
	KNN	SVM_RFE	9	0.75
	SVM	T-test	10	0.75
	LR	T-test	9	0.55

Supplementary Table S3

Performance of independent test dataset specific to k-mer(k=8, 9, …, 14)peptides from algorithms including eXtreme gradient boosting (XGBoost), logistic regression (LR),K-nearest neighbors (KNN) , support vector machine (SVM),Bootstrap Aggregating(Bagging) ,decision tree (Dtree) and naïve bayes (NB).

Length	**HLA-I**	**Classifier**	**AUC**	**Sn**	**Sp**	**MCC**	**ACC**
8	HLA-A*01:01	LR	0.9945	0.9552	0.9559	0.9111	0.9556
		SVM	0.9923	0.9552	0.9559	0.9111	0.9556
		Bagging	0.9192	1.0000	0.7941	0.8105	0.8963
		XGBoost	0.9377	1.0000	0.8088	0.8230	0.9037
		KNN	0.9687	0.9701	0.8676	0.8417	0.9407
		Dtree	0.9329	0.8806	0.9853	0.8713	0.9333

	NB	0.9767	0.9851	0.9118	0.8988	0.9481
HLA-A*02:01	LR	0.9188	0.8862	0.8797	0.7460	0.8730
	SVM	0.9023	0.8280	0.9177	0.7489	0.8730
	Bagging	0.8778	0.8535	0.8481	0.7016	0.8508
	XGBoost	0.8797	0.8726	0.8797	0.7523	0.8698
	KNN	0.8660	0.8790	0.8608	0.7398	0.8698
	Dtree	0.8476	0.8280	0.8670	0.6957	0.8476
	NB	0.8766	0.8853	0.8607	0.7462	0.8730
HLA-A*03:01	LR	0.9825	0.9474	0.9483	0.8956	0.9478
	SVM	0.9577	0.9474	0.9483	0.8956	0.9478
	Bagging	0.9607	0.8947	0.9655	0.8629	0.9304
	XGBoost	0.9616	0.9298	0.9310	0.8609	0.9304
	KNN	0.9502	0.9474	0.9483	0.8956	0.9478
	Dtree	0.9478	0.9474	0.9483	0.8956	0.9478
	NB	0.9522	0.9649	0.9483	0.9132	0.9565
HLA-A*03:01	LR	0.9825	0.9474	0.9483	0.8956	0.9478
	SVM	0.9577	0.9474	0.9483	0.8956	0.9478
	Bagging	0.9607	0.8947	0.9655	0.8629	0.9304
	XGBoost	0.9616	0.9298	0.9310	0.8609	0.9304
	KNN	0.9502	0.9474	0.9483	0.8956	0.9478
	Dtree	0.9478	0.9474	0.9483	0.8956	0.9478
	NB	0.9522	0.9649	0.9483	0.9132	0.9565
HLA-A*11:01	LR	0.9281	1.0000	0.7778	0.7935	0.8857
	SVM	0.9444	1.0000	0.8333	0.8416	0.9143
	Bagging	0.7990	0.8235	0.8333	0.6569	0.8286
	XGBoost	0.7892	0.7647	0.8333	0.6000	0.8000
	KNN	0.9069	1.0000	0.8333	0.8416	0.9143
	Dtree	0.7696	0.7059	0.8333	0.5446	0.7714
	NB	0.9575	0.8824	0.8333	0.7157	0.8571
HLA-A*24:02	LR	0.9126	0.9091	0.9333	0.8429	0.9213
	SVM	0.9611	0.8409	0.9333	0.7782	0.8876
	Bagging	0.9306	0.8636	0.9333	0.7994	0.8989
	XGBoost	0.9593	0.9091	0.9333	0.8429	0.9213
	KNN	0.9104	0.8864	0.9333	0.8209	0.9101
	Dtree	0.8758	0.8182	0.9333	0.7573	0.8764
	NB	0.9338	0.9545	0.9111	0.8661	0.9326
HLA-A*29:02	LR	0.9517	0.9558	0.9615	0.9174	0.9587
	SVM	0.9847	0.9669	0.9396	0.9067	0.9532
	Bagging	0.9680	0.9669	0.9505	0.9175	0.9587
	XGBoost	0.9754	0.9558	0.9505	0.9064	0.9532
	KNN	0.9510	0.9558	0.9396	0.8954	0.9477
	Dtree	0.8758	0.7901	0.9615	0.7632	0.8760
	NB	0.9444	0.9558	0.9670	0.9229	0.9614
HLA-B*07:02	LR	0.9517	0.9558	0.9615	0.9174	0.9587

	SVM	0.9847	0.9669	0.9396	0.9067	0.9532
	Bagging	0.9680	0.9669	0.9505	0.9175	0.9587
	XGBoost	0.9754	0.9558	0.9505	0.9064	0.9532
	KNN	0.9510	0.9558	0.9396	0.8954	0.9477
	Dtree	0.8758	0.7901	0.9615	0.7632	0.8760
	NB	0.9444	0.9558	0.9670	0.9229	0.9614
HLA-B*08:01	LR	0.9794	0.9913	0.9612	0.9529	0.9762
	SVM	0.9912	0.9913	0.9655	0.9571	0.9784
	Bagging	0.9802	0.9913	0.9698	0.9613	0.9806
	XGBoost	0.9904	0.9870	0.9698	0.9569	0.9784
	KNN	0.9800	0.9913	0.9655	0.9571	0.9784
	Dtree	0.9719	0.9784	0.9655	0.9439	0.9719
	NB	0.9769	0.9913	0.9655	0.9571	0.9784
HLA-B*13:02	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*14:02	LR	0.9864	0.9906	0.9813	0.9719	0.9859
	SVM	0.9866	0.9906	0.9813	0.9719	0.9859
	Bagging	0.9844	0.9906	0.9813	0.9719	0.9859
	XGBoost	0.9935	0.9811	0.9813	0.9624	0.9812
	KNN	0.9858	0.9906	0.9813	0.9719	0.9859
	Dtree	0.8444	0.7075	0.9813	0.7169	0.8451
	NB	0.9895	0.9906	0.9813	0.9719	0.9859
HLA-B*15:01	LR	0.9745	0.9375	0.8850	0.8234	0.9111
	SVM	0.9466	0.9375	0.9115	0.8492	0.9244
	Bagging	0.9343	0.9554	0.8673	0.8256	0.9111
	XGBoost	0.9383	0.9464	0.8761	0.8244	0.9111
	KNN	0.9352	0.9196	0.8761	0.7964	0.8978
	Dtree	0.9068	0.9464	0.8673	0.8160	0.9067
	NB	0.8738	0.9375	0.9027	0.8406	0.9200
HLA-B*18:01	LR	0.9849	0.9810	0.9717	0.9527	0.9763
	SVM	0.9738	0.9810	0.9717	0.9527	0.9763
	Bagging	0.9753	0.9810	0.9717	0.9527	0.9763
	XGBoost	0.9817	0.9810	0.9340	0.9157	0.9573
	KNN	0.9763	0.9810	0.9717	0.9527	0.9763
	Dtree	0.9574	0.9619	0.9528	0.9147	0.9573
	NB	0.9652	0.9810	0.9717	0.9527	0.9763
HLA-B*18:03	LR	1.0000	1.0000	0.9545	0.9545	0.9767
	SVM	1.0000	1.0000	0.9545	0.9545	0.9767
	Bagging	0.9751	0.9048	0.9545	0.8612	0.9302

	XGBoost	1.0000	1.0000	0.9545	0.9545	0.9767
	KNN	0.9773	1.0000	0.9091	0.9111	0.9535
	Dtree	0.9773	1.0000	0.9545	0.9545	0.9767
	NB	1.0000	1.0000	0.9545	0.9545	0.9767
HLA-B*27:05	LR	0.8317	0.8013	0.7580	0.5597	0.7796
	SVM	0.7887	0.7821	0.7134	0.4965	0.7476
	Bagging	0.7586	0.7885	0.6943	0.4848	0.7412
	XGBoost	0.8199	0.7628	0.7643	0.5272	0.7636
	KNN	0.7410	0.7821	0.7134	0.4965	0.7476
	Dtree	0.7254	0.7692	0.6815	0.4524	0.7252
	NB	0.7979	0.8077	0.7006	0.5112	0.7540
HLA-B*27:09	LR	0.9857	0.9500	0.9048	0.8548	0.9268
	SVM	0.9571	0.9500	0.9048	0.8548	0.9268
	Bagging	0.9274	0.9500	0.9048	0.8548	0.9268
	XGBoost	0.9464	0.9500	0.9048	0.8548	0.9268
	KNN	0.9250	0.9500	0.9048	0.8548	0.9268
	Dtree	0.9024	0.9000	0.9048	0.8048	0.9024
	NB	0.9857	0.9500	0.9048	0.8548	0.9268
HLA-B*35:01	LR	0.8483	0.8261	0.9362	0.7676	0.8817
	SVM	0.9070	0.8043	0.8723	0.6786	0.8387
	Bagging	0.9230	0.8043	0.9149	0.7243	0.8602
	XGBoost	0.9512	0.8261	0.8936	0.7217	0.8602
	KNN	0.8962	0.8261	0.9362	0.7676	0.8817
	Dtree	0.8599	0.8261	0.8936	0.7217	0.8602
	NB	0.9177	0.8261	0.8936	0.7217	0.8602
HLA-B*37:01	LR	0.9923	0.9918	0.9837	0.9755	0.9878
	SVM	0.9877	0.9918	0.9837	0.9755	0.9878
	Bagging	0.9863	0.9918	0.9675	0.9595	0.9796
	XGBoost	0.9898	0.9836	0.9756	0.9592	0.9796
	KNN	0.9877	0.9918	0.9837	0.9755	0.9878
	Dtree	0.9756	0.9918	0.9593	0.9515	0.9755
	NB	0.9883	0.9918	0.9837	0.9755	0.9878
HLA-B*39:01	LR	0.9683	0.8148	0.9643	0.7896	0.8909
	SVM	0.9606	0.8148	0.9643	0.7896	0.8909
	Bagging	0.8844	0.8148	0.8929	0.7105	0.8545
	XGBoost	0.9223	0.8148	0.9643	0.7896	0.8909
	KNN	0.8896	0.8148	0.9643	0.7896	0.8909
	Dtree	0.8896	0.8148	0.9643	0.7896	0.8909
	NB	0.9636	0.8148	0.9464	0.7693	0.8818
HLA-B*39:24	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	0.7885	1.0000	0.5769	0.6330	0.7843
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000

	Dtree	0.7885	1.0000	0.5769	0.6330	0.7843
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*40:01	LR	0.9848	1.0000	0.9545	0.9545	0.9767
	SVM	0.9762	1.0000	0.9545	0.9545	0.9767
	Bagging	0.9762	1.0000	0.9545	0.9545	0.9767
	XGBoost	0.9827	1.0000	0.9545	0.9545	0.9767
	KNN	0.9762	1.0000	0.9545	0.9545	0.9767
	Dtree	0.9773	1.0000	0.9545	0.9545	0.9767
	NB	0.9827	1.0000	0.9545	0.9545	0.9767
HLA-B*40:02	LR	0.9440	0.9632	0.9333	0.8969	0.9482
	SVM	0.9829	0.9766	0.8867	0.8667	0.9316
	Bagging	0.9657	0.9632	0.9600	0.9232	0.9616
	XGBoost	0.9789	0.9632	0.9533	0.9166	0.9583
	KNN	0.9128	0.9431	0.8700	0.8152	0.9065
	Dtree	0.9216	0.9699	0.8733	0.8471	0.9215
	NB	0.9709	0.9699	0.9333	0.9038	0.9516
HLA-B*44:02	LR	0.9954	0.9310	1.0000	0.9343	0.9661
	SVM	0.9609	0.8966	1.0000	0.9028	0.9492
	Bagging	0.9282	0.8966	0.9667	0.8662	0.9322
	XGBoost	0.9695	0.8966	1.0000	0.9028	0.9492
	KNN	0.9466	0.8966	1.0000	0.9028	0.9492
	Dtree	0.9483	0.8966	1.0000	0.9028	0.9492
	NB	0.9529	0.8966	1.0000	0.9028	0.9492
HLA-B*44:03	LR	0.9667	0.9643	0.8966	0.8619	0.9298
	SVM	0.8842	0.8571	0.8966	0.7546	0.8772
	Bagging	0.9304	0.9643	0.8966	0.8619	0.9298
	XGBoost	0.9304	0.9643	0.8966	0.8619	0.9298
	KNN	0.9304	0.9643	0.8966	0.8619	0.9298
	Dtree	0.9304	0.9643	0.8966	0.8619	0.9298
	NB	0.9729	0.9643	0.8621	0.8294	0.9123
HLA-B*46:01	LR	0.9548	0.9500	0.9048	0.8548	0.9268
	SVM	0.9405	0.9500	0.9048	0.8548	0.9268
	Bagging	0.9667	1.0000	0.9048	0.9069	0.9512
	XGBoost	0.9500	0.9500	0.9048	0.8548	0.9268
	KNN	0.9226	0.9500	0.9048	0.8548	0.9268
	Dtree	0.9036	0.9500	0.8571	0.8091	0.9024
	NB	0.9536	0.9500	0.9048	0.8548	0.9268
HLA-B*49:01	LR	0.9918	0.9766	0.9922	0.9690	0.9844
	SVM	0.9818	0.9766	0.9922	0.9690	0.9844
	Bagging	0.9881	0.9531	0.9922	0.9462	0.9728
	XGBoost	0.9877	0.9688	0.9922	0.9613	0.9805
	KNN	0.9843	0.9766	0.9922	0.9690	0.9844
	Dtree	0.9727	0.9531	0.9922	0.9462	0.9728
	NB	0.9817	0.9766	0.9922	0.9690	0.9844

HLA-B*51:01	LR	0.9615	0.9955	0.4234	0.5103	0.7088
	SVM	0.9732	0.9638	0.9414	0.9054	0.9526
	Bagging	0.9188	0.9457	0.8514	0.8005	0.8984
	XGBoost	0.9667	0.9910	0.7748	0.7840	0.8826
	KNN	0.9558	0.9638	0.9369	0.9010	0.9503
	Dtree	0.5383	1.0000	0.0766	0.1993	0.5372
	NB	0.9589	0.9955	0.3739	0.4711	0.6840
HLA-B*51:08	LR	0.9444	1.0000	0.9444	0.9444	0.9714
	SVM	0.9739	1.0000	0.9444	0.9444	0.9714
	Bagging	0.9722	1.0000	0.9444	0.9444	0.9714
	XGBoost	0.9722	1.0000	0.9444	0.9444	0.9714
	KNN	0.9722	1.0000	0.9444	0.9444	0.9714
	Dtree	0.9722	1.0000	0.9444	0.9444	0.9714
	NB	0.9477	1.0000	0.9444	0.9444	0.9714
HLA-B*52:01	LR	0.9706	0.9737	0.9740	0.9477	0.9739
	SVM	0.9675	0.9737	0.9740	0.9477	0.9739
	Bagging	0.9514	0.9342	0.8831	0.8182	0.9085
	XGBoost	0.9664	0.9605	0.9610	0.9216	0.9608
	KNN	0.9727	0.9737	0.9740	0.9477	0.9739
	Dtree	0.9411	0.9342	0.9481	0.8824	0.9412
	NB	0.9690	0.9605	0.9740	0.9347	0.9673
HLA-B*54:01	LR	0.9754	0.8800	0.9615	0.8454	0.9216
	SVM	0.9585	0.8800	0.9231	0.8043	0.9020
	Bagging	0.9615	1.0000	0.9231	0.9245	0.9608
	XGBoost	0.9823	0.8000	1.0000	0.8191	0.9020
	KNN	0.9362	0.8400	1.0000	0.8532	0.9216
	Dtree	0.8623	0.8400	0.8846	0.7257	0.8627
	NB	0.9246	0.8400	0.6923	0.5373	0.7647
HLA-B*57:01	LR	0.9529	0.8642	0.9634	0.8321	0.9141
	SVM	0.9410	0.8642	0.9634	0.8321	0.9141
	Bagging	0.9279	0.8395	0.9634	0.8097	0.9018
	XGBoost	0.9407	0.8642	0.9634	0.8321	0.9141
	KNN	0.9128	0.8642	0.9634	0.8321	0.9141
	Dtree	0.8771	0.8519	0.9024	0.7554	0.8773
	NB	0.9571	0.8642	0.9390	0.8058	0.9018
HLA-B*57:03	LR	0.9595	0.9649	0.9138	0.8795	0.9391
	SVM	0.9510	0.9649	0.9138	0.8795	0.9391
	Bagging	0.9492	0.9649	0.9138	0.8795	0.9391
	XGBoost	0.9481	0.9649	0.8966	0.8630	0.9304
	KNN	0.9377	0.9649	0.9138	0.8795	0.9391
	Dtree	0.9046	0.9298	0.8793	0.8099	0.9043
	NB	0.9365	0.9649	0.9138	0.8795	0.9391
HLA-B*58:01	LR	0.9938	0.9481	1.0000	0.9496	0.9742
	SVM	0.9903	0.9481	1.0000	0.9496	0.9742

	Bagging	0.9843	0.9610	0.9872	0.9487	0.9742
	XGBoost	0.9903	0.9091	0.9872	0.8994	0.9484
	KNN	0.9798	0.9740	0.9872	0.9614	0.9806
	Dtree	0.9288	0.8961	0.9615	0.8598	0.9290
	NB	0.9872	0.9740	0.9872	0.9614	0.9806
HLA-C*01:02	LR	0.9640	0.9630	0.9091	0.8729	0.9358
	SVM	0.9455	0.9630	0.9091	0.8729	0.9358
	Bagging	0.9399	0.9630	0.8727	0.8385	0.9174
	XGBoost	0.9428	0.9630	0.8727	0.8385	0.9174
	KNN	0.9322	0.9630	0.9091	0.8729	0.9358
	Dtree	0.9086	0.9444	0.8727	0.8188	0.9083
	NB	0.9424	0.9630	0.9091	0.8729	0.9358
HLA-C*02:02	LR	0.9583	1.0000	0.9200	0.9215	0.9592
	SVM	0.9350	1.0000	0.9200	0.9215	0.9592
	Bagging	0.9517	0.9583	0.9200	0.8783	0.9388
	XGBoost	0.9567	1.0000	0.9200	0.9215	0.9592
	KNN	0.9567	1.0000	0.9200	0.9215	0.9592
	Dtree	0.8983	0.9167	0.8800	0.7967	0.8980
	NB	0.9583	1.0000	0.9200	0.9215	0.9592
HLA-C*03:03	LR	0.8748	0.9412	0.8857	0.8276	0.9130
	SVM	0.9462	0.9412	0.8857	0.8276	0.9130
	Bagging	0.9345	0.9412	0.9429	0.8840	0.9420
	XGBoost	0.9218	0.9412	0.8857	0.8276	0.9130
	KNN	0.9067	0.9412	0.8857	0.8276	0.9130
	Dtree	0.8546	0.8235	0.8857	0.7110	0.8551
	NB	0.8950	0.9412	0.8857	0.8276	0.9130
HLA-C*03:04	LR	0.9885	0.9825	0.9483	0.9310	0.9652
	SVM	0.9776	0.9825	0.9310	0.9143	0.9565
	Bagging	0.9574	0.9649	0.9483	0.9132	0.9565
	XGBoost	0.9903	0.9649	0.9310	0.8962	0.9478
	KNN	0.9558	0.9825	0.9310	0.9143	0.9565
	Dtree	0.9480	0.9649	0.9310	0.8962	0.9478
	NB	0.9661	0.9649	0.9483	0.9132	0.9565
HLA-C*04:01	LR	0.9181	0.8797	0.9686	0.8519	0.9243
	SVM	0.9387	0.8797	0.9686	0.8519	0.9243
	Bagging	0.9311	0.8608	0.9560	0.8207	0.9085
	XGBoost	0.9434	0.8797	0.9560	0.8383	0.9180
	KNN	0.9231	0.8797	0.9686	0.8519	0.9243
	Dtree	0.9084	0.8861	0.9308	0.8178	0.9085
	NB	0.9151	0.8797	0.9623	0.8451	0.9211
HLA-C*05:01	LR	0.9655	0.9861	0.9517	0.9383	0.9689
	SVM	0.9902	0.9861	0.9517	0.9383	0.9689
	Bagging	0.9708	0.9792	0.9586	0.9379	0.9689
	XGBoost	0.9842	0.9861	0.9517	0.9383	0.9689

	KNN	0.9689	0.9861	0.9517	0.9383	0.9689
	Dtree	0.9689	0.9792	0.9586	0.9379	0.9689
	NB	0.9611	0.9861	0.9517	0.9383	0.9689
HLA-C*06:02	LR	0.9778	0.9429	0.9722	0.9158	0.9577
	SVM	0.9722	0.9429	0.9722	0.9158	0.9577
	Bagging	0.9659	0.9429	0.9722	0.9158	0.9577
	XGBoost	0.9603	0.9429	0.9722	0.9158	0.9577
	KNN	0.9496	0.9429	0.9444	0.8873	0.9437
	Dtree	0.9286	0.8571	1.0000	0.8675	0.9296
	NB	0.9810	0.9714	0.9444	0.9159	0.9577
HLA-C*07:01	LR	0.9367	0.9778	0.8696	0.8515	0.9231
	SVM	0.9213	0.9556	0.8696	0.8275	0.9121
	Bagging	0.9234	0.9778	0.8696	0.8515	0.9231
	XGBoost	0.9343	0.9778	0.8696	0.8515	0.9231
	KNN	0.9225	0.9556	0.8696	0.8275	0.9121
	Dtree	0.9126	0.9556	0.8696	0.8275	0.9121
	NB	0.9319	1.0000	0.8696	0.8759	0.9341
HLA-C*07:02	LR	0.9997	0.9811	0.9815	0.9626	0.9813
	SVM	0.9825	0.9811	0.9259	0.9080	0.9533
	Bagging	0.9628	0.9811	0.9444	0.9259	0.9626
	XGBoost	0.9628	0.9811	0.9444	0.9259	0.9626
	KNN	0.9626	0.9811	0.9259	0.9080	0.9533
	Dtree	0.9628	0.9811	0.9444	0.9259	0.9626
	NB	0.9706	0.9811	0.9259	0.9080	0.9533
HLA-C*07:04	LR	0.9947	1.0000	0.9500	0.9500	0.9744
	SVM	0.9816	1.0000	0.9500	0.9500	0.9744
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	0.9750	1.0000	0.9500	0.9500	0.9744
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	0.9474	1.0000	0.9499	0.9744
HLA-C*08:02	LR	0.9757	0.9753	1.0000	0.9757	0.9877
	SVM	0.9970	0.9691	1.0000	0.9697	0.9846
	Bagging	0.9741	0.9753	0.1288	0.1954	0.5508
	XGBoost	0.5120	0.5000	1.0000	0.5779	0.7508
	KNN	0.9874	0.9753	1.0000	0.9757	0.9877
	Dtree	0.9723	0.9568	0.9877	0.9451	0.9723
	NB	0.9756	0.9753	1.0000	0.9757	0.9877
HLA-C*12:03	LR	0.9237	1.0000	0.9032	0.9062	0.9508
	SVM	0.9624	1.0000	0.9032	0.9062	0.9508
	Bagging	0.9516	1.0000	0.9032	0.9062	0.9508
	XGBoost	0.8527	0.9000	0.8710	0.7710	0.8852
	KNN	0.9516	1.0000	0.9032	0.9062	0.9508
	Dtree	0.9194	1.0000	0.8387	0.8479	0.9180

		NB	0.9634	1.0000	0.8065	0.8198	0.9016
	HLA-C*14:02	LR	0.9859	0.9897	0.9898	0.9795	0.9897
		SVM	0.9904	0.9897	0.9898	0.9795	0.9897
		Bagging	0.9861	0.9897	0.7041	0.7231	0.8462
		XGBoost	0.9977	0.9897	0.9898	0.9795	0.9897
		KNN	0.9897	0.9897	0.9898	0.9795	0.9897
		Dtree	0.9897	0.9897	0.9898	0.9795	0.9897
		NB	0.9884	0.9897	0.9898	0.9795	0.9897
	HLA-C*15:02	LR	0.9878	1.0000	0.9250	0.9268	0.9620
		SVM	0.9821	1.0000	0.9250	0.9268	0.9620
		Bagging	0.9843	1.0000	0.9250	0.9268	0.9620
		XGBoost	0.9625	1.0000	0.9250	0.9268	0.9620
		KNN	0.9468	0.9744	0.9250	0.8999	0.9494
		Dtree	0.9625	1.0000	0.9250	0.9268	0.9620
		NB	0.9433	1.0000	0.9250	0.9268	0.9620
	HLA-C*16:01	LR	0.9796	0.9613	0.9423	0.9037	0.9518
		SVM	0.9755	0.9613	0.9423	0.9037	0.9518
		Bagging	0.9673	0.9484	0.9423	0.8907	0.9453
		XGBoost	0.9733	0.9742	0.9295	0.9045	0.9518
		KNN	0.9514	0.9613	0.9359	0.8974	0.9486
		Dtree	0.9422	0.9613	0.9231	0.8849	0.9421
		NB	0.9561	0.9677	0.9423	0.9103	0.9550
	HLA-C*17:01	LR	0.9277	0.8000	0.9231	0.7298	0.8627
		SVM	0.9477	0.9600	0.8077	0.7749	0.8824
		Bagging	0.8600	0.9600	0.7308	0.7073	0.8431
		XGBoost	0.9200	0.9600	0.7308	0.7073	0.8431
		KNN	0.8600	0.8000	0.9231	0.7298	0.8627
		Dtree	0.8638	0.9200	0.8077	0.7311	0.8627
		NB	0.9169	0.6000	0.9231	0.5547	0.7647
9	HLA-A*01:01	LR	0.9507	0.9454	0.9560	0.9014	0.9507
		SVM	0.9768	0.9444	0.9569	0.9015	0.9507
		Bagging	0.9562	0.9416	0.9522	0.8938	0.9469
		XGBoost	0.9780	0.9416	0.9522	0.8938	0.9469
		KNN	0.9554	0.9473	0.9550	0.9024	0.9512
		Dtree	0.9411	0.9330	0.9493	0.8824	0.9411
		NB	0.9411	0.9454	0.9569	0.9024	0.9512
	HLA-A*02:01	LR	0.9599	0.9005	0.9183	0.8190	0.9094
		SVM	0.7479	0.4665	0.6811	0.1511	0.5738
		Bagging	0.9100	0.8851	0.9196	0.8052	0.9024
		XGBoost	0.9227	0.8980	0.9175	0.8157	0.9077
		KNN	0.8543	0.9764	0.4928	0.5360	0.7345
		Dtree	0.8909	0.8754	0.9065	0.7822	0.8909
		NB	0.8582	0.1861	0.9617	0.2342	0.5739
	HLA-A*02:02	LR	0.9614	0.9272	0.8944	0.8219	0.9107

	SVM	0.9645	0.9238	0.9175	0.8413	0.9207
	Bagging	0.9198	0.9106	0.9109	0.8215	0.9107
	XGBoost	0.9560	0.8974	0.9274	0.8251	0.9124
	KNN	0.9208	0.9205	0.9208	0.8413	0.9207
	Dtree	0.8959	0.9205	0.8713	0.7927	0.8959
	NB	0.9453	0.9371	0.8812	0.8195	0.9091
HLA-A*02:03	LR	0.9716	0.9599	0.9123	0.8732	0.9361
	SVM	0.9587	0.9522	0.9231	0.8757	0.9376
	Bagging	0.9440	0.9445	0.9092	0.8543	0.9269
	XGBoost	0.9519	0.8921	0.9446	0.8379	0.9184
	KNN	0.8026	0.6148	0.9877	0.6494	0.8014
	Dtree	0.8899	0.8767	0.9031	0.7801	0.8899
	NB	0.9193	0.9014	0.9462	0.8484	0.9238
HLA-A*02:04	LR	0.9760	0.9457	0.9458	0.8915	0.9458
	SVM	0.9665	0.9420	0.9458	0.8879	0.9439
	Bagging	0.9621	0.9384	0.9386	0.8770	0.9385
	XGBoost	0.9681	0.9457	0.9422	0.8879	0.9439
	KNN	0.9470	0.9420	0.9422	0.8843	0.9421
	Dtree	0.9277	0.9275	0.9278	0.8553	0.9277
	NB	0.9154	0.9457	0.9458	0.8915	0.9458
HLA-B*07:02	LR	0.9824	0.9425	0.9674	0.9101	0.9549
	SVM	0.8412	0.9566	0.3492	0.3850	0.6529
	Bagging	0.7243	0.5122	0.8763	0.4171	0.6943
	XGBoost	0.9400	0.8991	0.8402	0.7406	0.8697
	KNN	0.9570	0.9405	0.9659	0.9067	0.9532
	Dtree	0.7097	0.9386	0.4808	0.4717	0.7096
	NB	0.9847	0.9586	0.9396	0.8983	0.9491
HLA-B*08:01	LR	0.9848	0.9394	0.9603	0.8999	0.9498
	SVM	0.9732	0.9432	0.9432	0.8864	0.9432
	Bagging	0.9569	0.8920	0.9111	0.8033	0.9016
	XGBoost	0.9638	0.9328	0.9111	0.8440	0.9219
	KNN	0.9216	0.8864	0.9480	0.8359	0.9172
	Dtree	0.8386	0.7443	0.9328	0.6896	0.8386
	NB	0.8414	0.9744	0.1504	0.2203	0.5622
HLA-B*13:02	LR	0.9800	0.9751	0.9818	0.9569	0.9785
	SVM	0.9880	0.9751	0.9818	0.9569	0.9785
	Bagging	0.9823	0.9718	0.9851	0.9570	0.9785
	XGBoost	0.9957	0.9751	0.9818	0.9569	0.9785
	KNN	0.9783	0.9751	0.9818	0.9569	0.9785
	Dtree	0.9785	0.9751	0.9818	0.9569	0.9785
	NB	0.9880	0.9768	0.9818	0.9586	0.9793
HLA-B*14:01	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000

	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	0.9487	0.9474	0.9500	0.8974	0.9487
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*14:02	LR	0.9741	0.9542	0.9497	0.9039	0.9519
	SVM	0.9682	0.9817	0.9360	0.9186	0.9588
	Bagging	0.9692	0.5344	0.9817	0.5771	0.7582
	XGBoost	0.9858	0.9832	0.9314	0.9158	0.9573
	KNN	0.9592	0.9786	0.9268	0.9066	0.9527
	Dtree	0.7980	0.9237	0.6723	0.6156	0.7979
	NB	0.9631	0.9649	0.9329	0.8983	0.9489
HLA-B*15:01	LR	0.9805	0.9971	0.4579	0.5402	0.7274
	SVM	0.9265	0.9648	0.8869	0.8543	0.9258
	Bagging	0.6679	0.7464	0.3636	0.1191	0.5550
	XGBoost	0.9789	0.9543	0.9296	0.8842	0.9420
	KNN	0.8946	0.9371	0.8400	0.7808	0.8885
	Dtree	0.9384	0.9388	0.9380	0.8768	0.9384
	NB	0.9557	0.9497	0.9514	0.9011	0.9506
HLA-B*15:02	LR	0.9766	0.9811	0.9444	0.9259	0.9626
	SVM	0.9430	0.9811	0.9444	0.9259	0.9626
	Bagging	0.9628	0.9811	0.9444	0.9259	0.9626
	XGBoost	0.9764	0.9811	0.9444	0.9259	0.9626
	KNN	0.9623	0.9811	0.9444	0.9259	0.9626
	Dtree	0.9628	0.9811	0.9444	0.9259	0.9626
	NB	0.9757	0.9811	0.9074	0.8904	0.9439
HLA-B*15:03	LR	0.9358	0.8902	0.9398	0.8312	0.9152
	SVM	0.9522	0.8902	0.9277	0.8187	0.9091
	Bagging	0.9378	0.8049	0.9518	0.7655	0.8788
	XGBoost	0.9691	0.8049	0.9518	0.7655	0.8788
	KNN	0.9182	0.9024	0.9157	0.8182	0.9091
	Dtree	0.8783	0.8049	0.9518	0.7655	0.8788
	NB	0.9597	0.9390	0.9157	0.8548	0.9273
HLA-B*15:09	LR	0.9719	0.8571	1.0000	0.8685	0.9302
	SVM	0.9913	0.8571	1.0000	0.8685	0.9302
	Bagging	0.9253	0.8571	1.0000	0.8685	0.9302
	XGBoost	0.9773	0.8571	1.0000	0.8685	0.9302
	KNN	0.9286	0.8571	1.0000	0.8685	0.9302
	Dtree	0.9286	0.8571	1.0000	0.8685	0.9302
	NB	0.9848	0.8571	1.0000	0.8685	0.9302
HLA-B*15:11	LR	0.9609	0.8973	0.9409	0.8390	0.9191
	SVM	0.9314	0.9027	0.9409	0.8443	0.9218
	Bagging	0.9287	0.9027	0.9409	0.8443	0.9218
	XGBoost	0.9484	0.8973	0.9355	0.8335	0.9164
	KNN	0.9208	0.9027	0.9409	0.8443	0.9218

	Dtree	0.9218	0.9027	0.9409	0.8443	0.9218
	NB	0.9204	0.9189	0.9409	0.8600	0.9299
HLA-B*15:17	LR	0.8721	0.9091	0.8400	0.7507	0.8744
	SVM	0.8920	0.9192	0.8300	0.7519	0.8744
	Bagging	0.9037	0.9192	0.8200	0.7426	0.8693
	XGBoost	0.8912	0.8889	0.8400	0.7296	0.8643
	KNN	0.8817	0.8990	0.8400	0.7401	0.8693
	Dtree	0.8443	0.8687	0.8200	0.6894	0.8442
	NB	0.8842	0.9293	0.8200	0.7535	0.8744
HLA-B*15:18	LR	0.9838	0.9861	0.9862	0.9723	0.9861
	SVM	0.9955	0.9954	0.9862	0.9816	0.9908
	Bagging	0.9875	0.9861	0.9862	0.9723	0.9861
	XGBoost	0.9940	0.9722	0.9862	0.9585	0.9792
	KNN	0.9930	0.9954	0.9862	0.9816	0.9908
	Dtree	0.9908	0.9954	0.9862	0.9816	0.9908
	NB	0.9850	0.9954	0.9862	0.9816	0.9908
HLA-B*15:42	LR	0.9304	0.8873	0.8750	0.7623	0.8811
	SVM	0.8953	0.9155	0.9028	0.8183	0.9091
	Bagging	0.9219	0.9155	0.9167	0.8322	0.9161
	XGBoost	0.9475	0.9155	0.9167	0.8322	0.9161
	KNN	0.9114	0.9014	0.9167	0.8182	0.9091
	Dtree	0.9161	0.9155	0.9167	0.8322	0.9161
	NB	0.8933	0.9155	0.9028	0.8183	0.9091
HLA-B*18:01	LR	0.9695	0.9543	0.9400	0.8945	0.9472
	SVM	0.9388	0.5072	0.9544	0.5163	0.7311
	Bagging	0.9562	0.9519	0.9400	0.8920	0.9460
	XGBoost	0.9772	0.9591	0.9520	0.9112	0.9556
	KNN	0.6551	0.3654	0.9520	0.3921	0.6591
	Dtree	0.7562	0.6779	0.8345	0.5189	0.7563
	NB	0.9564	0.9447	0.9568	0.9016	0.9508
HLA-B*18:03	LR	0.9242	0.9063	0.9091	0.8153	0.9077
	SVM	0.8968	0.9375	0.9091	0.8466	0.9231
	Bagging	0.8428	0.8125	0.8788	0.6933	0.8462
	XGBoost	0.8456	0.8125	0.8788	0.6933	0.8462
	KNN	0.9242	1.0000	0.7273	0.7534	0.8615
	Dtree	0.8456	0.8125	0.8788	0.6933	0.8462
	NB	0.9337	1.0000	0.8485	0.8566	0.9231
HLA-B*27:01	LR	0.9563	1.0000	0.6385	0.6846	0.8190
	SVM	0.9878	0.9894	0.9683	0.9579	0.9789
	Bagging	0.9819	0.9921	0.9631	0.9555	0.9775
	XGBoost	0.9886	0.9894	0.9683	0.9579	0.9789
	KNN	0.9834	0.9947	0.9631	0.9582	0.9789
	Dtree	0.9762	0.9894	0.9631	0.9528	0.9762
	NB	0.9799	0.9974	0.9578	0.9558	0.9775

HLA-B*27:02	LR	0.9841	0.9844	0.9884	0.9728	0.9864
	SVM	0.9952	0.9922	0.9884	0.9806	0.9903
	Bagging	0.9881	0.9611	0.9767	0.9380	0.9689
	XGBoost	0.9940	0.9961	0.9651	0.9616	0.9806
	KNN	0.9902	0.9922	0.9884	0.9806	0.9903
	Dtree	0.9806	0.9805	0.9806	0.9612	0.9806
	NB	0.9828	0.9883	0.9651	0.9537	0.9767
HLA-B*27:03	LR	0.9815	0.9804	0.9806	0.9610	0.9805
	SVM	0.9799	0.9804	0.9806	0.9610	0.9805
	Bagging	0.9801	0.9804	0.9806	0.9610	0.9805
	XGBoost	0.9882	0.9804	0.9806	0.9610	0.9805
	KNN	0.9750	0.9804	0.9709	0.9513	0.9756
	Dtree	0.9805	0.9804	0.9806	0.9610	0.9805
	NB	0.9809	0.9804	0.9806	0.9610	0.9805
HLA-B*27:04	LR	0.9817	0.9903	0.9663	0.9569	0.9783
	SVM	0.9928	0.9807	0.9735	0.9542	0.9771
	Bagging	0.9823	0.9855	0.9687	0.9543	0.9771
	XGBoost	0.9901	0.9903	0.9711	0.9616	0.9807
	KNN	0.9813	0.9807	0.9759	0.9566	0.9783
	Dtree	0.9771	0.9855	0.9687	0.9543	0.9771
	NB	0.9763	0.9903	0.9663	0.9569	0.9783
HLA-B*27:05	LR	0.9365	0.8273	0.9167	0.7470	0.8720
	SVM	0.7389	0.8489	0.6660	0.5238	0.7575
	Bagging	0.8625	0.8612	0.7968	0.6593	0.8290
	XGBoost	0.9016	0.8489	0.8570	0.7060	0.8530
	KNN	0.8466	0.8664	0.7596	0.6296	0.8130
	Dtree	0.8259	0.8546	0.7973	0.6529	0.8259
	NB	0.9348	0.9426	0.6618	0.6297	0.8022
HLA-B*27:06	LR	0.9833	0.9691	0.9387	0.9081	0.9538
	SVM	0.9816	0.9568	0.9509	0.9077	0.9538
	Bagging	0.9625	0.9568	0.9325	0.8895	0.9446
	XGBoost	0.9805	0.9630	0.9325	0.8958	0.9477
	KNN	0.9676	0.9568	0.9571	0.9138	0.9569
	Dtree	0.9324	0.9630	0.9018	0.8663	0.9323
	NB	0.9503	0.9691	0.9141	0.8845	0.9415
HLA-B*27:07	LR	0.9880	0.9955	0.9865	0.9820	0.9910
	SVM	0.9900	0.9955	0.9865	0.9820	0.9910
	Bagging	0.9944	0.9864	0.9865	0.9729	0.9865
	XGBoost	0.9867	0.9955	0.9820	0.9775	0.9887
	KNN	0.9908	0.9955	0.9865	0.9820	0.9910
	Dtree	0.9842	0.9864	0.9820	0.9684	0.9842
	NB	0.9887	0.9955	0.9865	0.9820	0.9910
HLA-B*27:08	LR	0.9968	0.9947	0.9947	0.9894	0.9947
	SVM	0.9958	0.9947	0.9947	0.9894	0.9947

	Bagging	0.9942	0.9947	0.9947	0.9894	0.9947
	XGBoost	0.9894	0.9947	0.9788	0.9736	0.9867
	KNN	0.9946	0.9947	0.9947	0.9894	0.9947
	Dtree	0.9814	0.9681	0.9947	0.9632	0.9814
	NB	0.9977	0.9947	0.9947	0.9894	0.9947
HLA-B*27:09	LR	0.9853	0.9066	0.9705	0.8789	0.9386
	SVM	0.9769	0.9246	0.9574	0.8825	0.9410
	Bagging	0.9311	0.5984	0.9198	0.5473	0.7592
	XGBoost	0.9775	0.9279	0.9362	0.8641	0.9320
	KNN	0.9409	0.9115	0.9640	0.8767	0.9378
	Dtree	0.7451	0.5541	0.9362	0.5306	0.7453
	NB	0.8338	0.0443	0.9804	0.0700	0.5127
HLA-B*27:20	LR	0.9368	0.9474	0.9500	0.8974	0.9487
	SVM	0.9605	0.8947	0.9500	0.8470	0.9231
	Bagging	0.9263	0.9474	0.9000	0.8474	0.9231
	XGBoost	0.9763	0.8947	0.9500	0.8470	0.9231
	KNN	0.9487	0.9474	0.9500	0.8974	0.9487
	Dtree	0.8987	0.9474	0.8500	0.7995	0.8974
	NB	0.9421	0.9474	0.9500	0.8974	0.9487
HLA-B*35:01	LR	0.9612	0.9436	0.9455	0.8891	0.9446
	SVM	0.9661	0.9387	0.9528	0.8917	0.9458
	Bagging	0.9326	0.5000	0.9620	0.5210	0.7311
	XGBoost	0.9700	0.9387	0.9424	0.8812	0.9406
	KNN	0.9477	0.9332	0.9547	0.8881	0.9440
	Dtree	0.9397	0.9363	0.9430	0.8793	0.9397
	NB	0.9137	0.6918	0.9792	0.7006	0.8355
HLA-B*35:03	LR	0.9918	0.9809	0.9755	0.9564	0.9782
	SVM	0.9899	0.9795	0.9755	0.9550	0.9775
	Bagging	0.9850	0.9823	0.9700	0.9524	0.9761
	XGBoost	0.9947	0.9823	0.9755	0.9578	0.9789
	KNN	0.9780	0.9809	0.9755	0.9564	0.9782
	Dtree	0.9748	0.9754	0.9741	0.9496	0.9748
	NB	0.9720	0.9795	0.9755	0.9550	0.9775
HLA-B*35:08	LR	0.9704	0.9175	0.9641	0.8827	0.9409
	SVM	0.9740	0.9278	0.9590	0.8873	0.9434
	Bagging	0.9623	0.9175	0.9590	0.8773	0.9383
	XGBoost	0.9802	0.9124	0.9590	0.8724	0.9357
	KNN	0.9584	0.9278	0.9590	0.8873	0.9434
	Dtree	0.9331	0.9227	0.9436	0.8665	0.9332
	NB	0.9229	0.9278	0.9590	0.8873	0.9434
HLA-B*37:01	LR	0.9774	0.9826	0.9695	0.9522	0.9760
	SVM	0.9867	0.9767	0.9710	0.9477	0.9739
	Bagging	0.8434	0.1323	0.9710	0.1896	0.5519
	XGBoost	0.9911	0.9753	0.9739	0.9492	0.9746

	KNN	0.9556	0.9637	0.9289	0.8931	0.9463
	Dtree	0.5487	0.1265	0.9710	0.1820	0.5490
	NB	0.9617	0.9840	0.9666	0.9508	0.9753
HLA-B*38:01	LR	0.9916	0.9859	0.9859	0.9718	0.9859
	SVM	0.9886	0.9872	0.9859	0.9731	0.9865
	Bagging	0.9552	0.9179	0.9846	0.9046	0.9513
	XGBoost	0.6737	0.9897	0.1050	0.2032	0.5471
	KNN	0.9859	0.9859	0.9859	0.9718	0.9859
	Dtree	0.5461	0.9897	0.1024	0.1998	0.5458
	NB	0.9944	0.9859	0.9859	0.9718	0.9859
HLA-B*39:01	LR	0.9820	0.9717	0.9604	0.9321	0.9660
	SVM	0.9862	0.9717	0.9717	0.9434	0.9717
	Bagging	0.9744	0.9649	0.9740	0.9389	0.9694
	XGBoost	0.9855	0.9717	0.9683	0.9400	0.9700
	KNN	0.9744	0.9706	0.9717	0.9423	0.9711
	Dtree	0.9604	0.9570	0.9638	0.9208	0.9604
	NB	0.9758	0.9875	0.9400	0.9286	0.9638
HLA-B*39:06	LR	0.9857	0.9810	0.9748	0.9558	0.9779
	SVM	0.9970	0.9937	0.9716	0.9655	0.9826
	Bagging	0.9331	0.8639	0.9811	0.8510	0.9226
	XGBoost	0.9888	0.9937	0.9716	0.9655	0.9826
	KNN	0.9791	0.9715	0.9716	0.9431	0.9716
	Dtree	0.9826	0.9937	0.9716	0.9655	0.9826
	NB	0.9832	0.9937	0.9716	0.9655	0.9826
HLA-B*39:24	LR	0.9696	1.0000	0.9286	0.9306	0.9641
	SVM	0.9659	0.9897	0.9286	0.9197	0.9590
	Bagging	0.9702	0.9485	0.9286	0.8771	0.9385
	XGBoost	0.9779	0.9588	0.9286	0.8876	0.9436
	KNN	0.9659	0.9897	0.9286	0.9197	0.9590
	Dtree	0.9383	0.9072	0.9694	0.8785	0.9385
	NB	0.9507	1.0000	0.9286	0.9306	0.9641
HLA-C*01:02	LR	0.9798	0.9771	0.9810	0.9581	0.9790
	SVM	0.9923	0.9771	0.9810	0.9581	0.9790
	Bagging	0.9784	0.9695	0.9772	0.9467	0.9733
	XGBoost	0.9865	0.9733	0.9810	0.9543	0.9771
	KNN	0.9800	0.9198	0.9848	0.9067	0.9524
	Dtree	0.9733	0.9695	0.9772	0.9467	0.9733
	NB	0.9674	0.9771	0.9810	0.9581	0.9790
HLA-C*02:02	LR	0.9728	0.9680	0.9361	0.9046	0.9521
	SVM	0.8665	0.9758	0.1694	0.2454	0.5724
	Bagging	0.9621	0.9680	0.9293	0.8980	0.9487
	XGBoost	0.9452	0.9816	0.8664	0.8536	0.9240
	KNN	0.6278	0.9041	0.3040	0.2600	0.6039
	Dtree	0.9621	0.9680	0.9293	0.8980	0.9487

	NB	0.9596	0.9554	0.9448	0.9003	0.9501
HLA-C*03:03	LR	0.6000	0.9989	0.0611	0.1730	0.5298
	SVM	0.9512	0.9979	0.7703	0.7888	0.8840
	Bagging	0.9372	0.9536	0.5701	0.5669	0.7617
	XGBoost	0.8633	0.9979	0.6807	0.7155	0.8392
	KNN	0.9499	0.9483	0.9526	0.9009	0.9504
	Dtree	0.9436	0.9378	0.9494	0.8872	0.9436
	NB	0.9392	0.7795	0.9779	0.7728	0.8788
HLA-C*03:04	LR	0.9683	0.9656	0.9538	0.9195	0.9597
	SVM	0.9471	0.7382	0.9207	0.6702	0.8295
	Bagging	0.9707	0.9467	0.9657	0.9125	0.9562
	XGBoost	0.6777	0.7038	0.6497	0.3540	0.6767
	KNN	0.6443	0.3235	0.9633	0.3732	0.6436
	Dtree	0.9568	0.9538	0.9598	0.9136	0.9568
	NB	0.9596	0.9656	0.9538	0.9195	0.9597
HLA-C*04:01	LR	0.9701	0.9167	0.9470	0.8641	0.9319
	SVM	0.8875	0.6952	0.9457	0.6621	0.8205
	Bagging	0.7473	0.4633	0.9710	0.5042	0.7172
	XGBoost	0.9620	0.9143	0.9414	0.8560	0.9278
	KNN	0.9133	0.8779	0.9414	0.8210	0.9097
	Dtree	0.7196	0.4688	0.9704	0.5078	0.7197
	NB	0.9402	0.7465	0.9858	0.7542	0.8662
HLA-C*05:01	LR	0.9471	0.9836	0.9373	0.9219	0.9605
	SVM	0.9746	0.9768	0.9496	0.9267	0.9632
	Bagging	0.8907	0.2374	0.9986	0.3641	0.6183
	XGBoost	0.8969	0.3915	0.9510	0.4133	0.6714
	KNN	0.9628	0.9700	0.9537	0.9238	0.9618
	Dtree	0.5218	0.0559	0.9877	0.1203	0.5222
	NB	0.9640	0.9782	0.9469	0.9255	0.9625
HLA-C*06:02	LR	0.9419	0.9946	0.7362	0.7564	0.8653
	SVM	0.9735	0.9494	0.9440	0.8934	0.9467
	Bagging	0.9597	0.9385	0.9440	0.8825	0.9413
	XGBoost	0.9772	0.9611	0.9322	0.8937	0.9467
	KNN	0.9517	0.9278	0.9512	0.8943	0.9471
	Dtree	0.9413	0.9439	0.9386	0.8825	0.9413
	NB	0.9483	0.9656	0.9304	0.8966	0.9480
HLA-C*07:01	LR	0.9708	0.9606	0.9368	0.8977	0.9487
	SVM	0.9495	0.8650	0.8680	0.7330	0.8665
	Bagging	0.9270	0.9522	0.8399	0.7971	0.8960
	XGBoost	0.9545	0.6540	0.9480	0.6300	0.8011
	KNN	0.9586	0.9480	0.9649	0.9130	0.9564
	Dtree	0.8932	0.9494	0.8371	0.7914	0.8932
	NB	0.9524	0.9170	0.9593	0.8771	0.9382
HLA-C*07:02	LR	0.9452	0.9646	0.9278	0.8930	0.9462

	SVM	0.5142	0.9952	0.0257	0.0851	0.5100
	Bagging	0.8982	0.7524	0.9406	0.7057	0.8466
	XGBoost	0.9493	0.8328	0.9358	0.7728	0.8843
	KNN	0.7649	0.5997	0.9246	0.5544	0.7622
	Dtree	0.8570	0.7974	0.9165	0.7191	0.8570
	NB	0.6978	1.0000	0.0032	0.0401	0.5012
HLA-C*07:04	LR	0.8449	0.6679	0.9890	0.6938	0.8286
	SVM	0.8746	1.0000	0.0018	0.0303	0.5005
	Bagging	0.9635	0.6385	0.9780	0.6556	0.8084
	XGBoost	0.9781	0.9615	0.8352	0.8030	0.8983
	KNN	0.9610	0.9596	0.9597	0.9193	0.9597
	Dtree	0.6294	0.2697	0.9890	0.3726	0.6297
	NB	0.9671	0.4367	0.9725	0.4848	0.7049
HLA-C*08:02	LR	0.9349	0.2953	0.9644	0.3495	0.6300
	SVM	0.9799	0.9593	0.9613	0.9206	0.9603
	Bagging	0.9052	0.6029	0.9583	0.6004	0.7807
	XGBoost	0.9671	0.8513	0.9542	0.8099	0.9028
	KNN	0.9625	0.9644	0.9563	0.9206	0.9603
	Dtree	0.9573	0.9582	0.9563	0.9145	0.9573
	NB	0.9413	0.9644	0.9573	0.9217	0.9608
HLA-C*12:03	LR	0.9845	0.9867	0.9069	0.8964	0.9467
	SVM	0.9665	0.9947	0.8723	0.8734	0.9334
	Bagging	0.8800	0.8933	0.8245	0.7195	0.8589
	XGBoost	0.9803	0.9787	0.9441	0.9233	0.9614
	KNN	0.8861	0.8053	0.9574	0.7719	0.8815
	Dtree	0.5040	1.0000	0.0080	0.0632	0.5033
	NB	0.9716	0.9947	0.8537	0.8568	0.9241
HLA-C*14:02	LR	0.9671	1.0000	0.8747	0.8815	0.9372
	SVM	0.9918	0.9836	0.9619	0.9457	0.9727
	Bagging	0.9800	0.9863	0.9619	0.9484	0.9741
	XGBoost	0.9841	0.9863	0.9619	0.9484	0.9741
	KNN	0.9752	0.9863	0.9619	0.9484	0.9741
	Dtree	0.9632	0.9727	0.9537	0.9265	0.9632
	NB	0.9644	0.9891	0.9591	0.9486	0.9741
HLA-C*15:02	LR	0.9593	0.9557	0.9392	0.8950	0.9474
	SVM	0.9661	0.9668	0.9309	0.8982	0.9488
	Bagging	0.9432	0.9584	0.9309	0.8897	0.9447
	XGBoost	0.9688	0.9668	0.9309	0.8982	0.9488
	KNN	0.9478	0.9668	0.9309	0.8982	0.9488
	Dtree	0.9170	0.9030	0.9309	0.8343	0.9170
	NB	0.9769	0.9640	0.9392	0.9035	0.9516
HLA-C*16:01	LR	0.9515	0.8729	0.9709	0.8480	0.9220
	SVM	0.9705	0.9495	0.8303	0.7853	0.8898
	Bagging	0.9656	0.8453	0.9847	0.8383	0.9151

		XGBoost	0.9831	0.9449	0.9572	0.9021	0.9510
		KNN	0.6419	0.7213	0.5612	0.2861	0.6412
		Dtree	0.9487	0.9219	0.9755	0.8988	0.9487
		NB	0.8789	0.4043	0.9434	0.4129	0.6741
	HLA-C*17:01	LR	0.9067	0.8929	0.9529	0.8476	0.9231
		SVM	0.9202	0.8929	0.9529	0.8476	0.9231
		Bagging	0.9165	0.8571	0.9647	0.8271	0.9112
		XGBoost	0.9458	0.8690	0.9647	0.8380	0.9172
		KNN	0.9229	0.8929	0.9529	0.8476	0.9231
		Dtree	0.9169	0.8690	0.9647	0.8380	0.9172
		NB	0.9605	0.9167	0.9176	0.8343	0.9172
10	HLA-A*01:01	LR	0.9779	0.9843	0.9487	0.9336	0.9665
		SVM	0.8625	0.5839	0.8772	0.4824	0.7307
		Bagging	0.8123	0.8613	0.4018	0.2962	0.6313
		XGBoost	0.8087	0.6734	0.9665	0.6695	0.8201
		KNN	0.9712	0.9821	0.9487	0.9313	0.9654
		Dtree	0.9609	0.9664	0.9554	0.9218	0.9609
		NB	0.9478	0.6174	0.9621	0.6175	0.7899
	HLA-A*02:01	LR	0.9573	0.9754	0.7075	0.7088	0.8414
		SVM	0.7850	0.9802	0.6679	0.6821	0.8240
		Bagging	0.6035	0.9216	0.3283	0.3104	0.6248
		XGBoost	0.8856	0.9018	0.7387	0.6491	0.8202
		KNN	0.9020	0.9216	0.8028	0.7296	0.8622
		Dtree	0.6160	0.9103	0.3217	0.2869	0.6159
		NB	0.4902	0.0878	0.9245	0.0225	0.5064
	HLA-A*02:02	LR	0.9399	0.9550	0.8756	0.8331	0.9152
		SVM	0.9413	0.9450	0.9055	0.8511	0.9252
		Bagging	0.9308	0.9300	0.8955	0.8260	0.9127
		XGBoost	0.9572	0.9500	0.8856	0.8372	0.9177
		KNN	0.9225	0.9550	0.8856	0.8425	0.9202
		Dtree	0.9228	0.9600	0.8856	0.8478	0.9227
		NB	0.9245	0.9450	0.9005	0.8463	0.9227
	HLA-A*02:03	LR	0.9765	0.9500	0.9315	0.8816	0.9407
		SVM	0.9556	0.9500	0.9315	0.8816	0.9407
		Bagging	0.9423	0.9281	0.9283	0.8565	0.9282
		XGBoost	0.9667	0.9250	0.9408	0.8659	0.9329
		KNN	0.9454	0.9375	0.9377	0.8752	0.9376
		Dtree	0.9033	0.8938	0.9128	0.8067	0.9033
		NB	0.9528	0.9531	0.9315	0.8848	0.9423
	HLA-A*02:04	LR	0.9758	0.9677	1.0000	0.9687	0.9841
		SVM	0.9698	0.9677	1.0000	0.9687	0.9841
		Bagging	0.9970	0.9355	1.0000	0.9383	0.9683
		XGBoost	0.9758	0.9355	1.0000	0.9383	0.9683
		KNN	0.9682	0.9677	0.9688	0.9365	0.9683

	Dtree	0.9677	0.9355	1.0000	0.9383	0.9683
	NB	0.9688	0.9677	1.0000	0.9687	0.9841
HLA-A*02:05	LR	0.9840	0.9733	0.9211	0.8953	0.9470
	SVM	0.9691	0.9200	0.9737	0.8953	0.9470
	Bagging	0.9586	0.8933	0.9737	0.8702	0.9338
	XGBoost	0.9725	0.9067	0.9474	0.8549	0.9272
	KNN	0.9708	0.9200	0.9737	0.8953	0.9470
	Dtree	0.9138	0.8933	0.9342	0.8284	0.9139
	NB	0.9546	0.9200	0.9737	0.8953	0.9470
HLA-A*02:06	LR	0.9635	0.9624	0.9065	0.8702	0.9344
	SVM	0.9636	0.9671	0.8879	0.8575	0.9274
	Bagging	0.9344	0.9014	0.9206	0.8221	0.9110
	XGBoost	0.9560	0.9765	0.8785	0.8590	0.9274
	KNN	0.8957	0.7793	0.9486	0.7388	0.8642
	Dtree	0.9274	0.9390	0.9159	0.8550	0.9274
	NB	0.9194	0.9577	0.9065	0.8653	0.9321
HLA-A*02:07	LR	0.9381	0.8913	0.9570	0.8504	0.9243
	SVM	0.9079	0.8913	0.9570	0.8504	0.9243
	Bagging	0.9572	0.8370	0.9570	0.8001	0.8973
	XGBoost	0.9713	0.8913	0.9462	0.8390	0.9189
	KNN	0.9377	0.9022	0.9570	0.8607	0.9297
	Dtree	0.9133	0.8804	0.9462	0.8287	0.9135
	NB	0.9202	0.8913	0.9570	0.8504	0.9243
HLA-A*02:17	LR	0.9860	1.0000	0.9677	0.9677	0.9836
	SVM	0.9763	1.0000	0.9677	0.9677	0.9836
	Bagging	0.9903	0.9000	1.0000	0.9059	0.9508
	XGBoost	0.9672	0.9667	0.9677	0.9344	0.9672
	KNN	0.9677	1.0000	0.9355	0.9365	0.9672
	Dtree	0.9672	0.9667	0.9677	0.9344	0.9672
	NB	0.9516	1.0000	0.9355	0.9365	0.9672
HLA-A*03:01	LR	0.9770	0.9577	0.9296	0.8876	0.9436
	SVM	0.9521	0.9556	0.9316	0.8875	0.9436
	Bagging	0.9434	0.9577	0.9256	0.8836	0.9416
	XGBoost	0.9718	0.9556	0.9256	0.8816	0.9406
	KNN	0.9479	0.9597	0.9316	0.8916	0.9456
	Dtree	0.9356	0.9556	0.9155	0.8718	0.9355
	NB	0.9217	0.9415	0.9457	0.8872	0.9436
HLA-A*11:01	LR	0.9748	0.9575	0.9423	0.8999	0.9499
	SVM	0.9468	0.9609	0.9355	0.8966	0.9482
	Bagging	0.9610	0.9201	0.9457	0.8660	0.9329
	XGBoost	0.9733	0.9507	0.9355	0.8863	0.9431
	KNN	0.9537	0.9558	0.9474	0.9032	0.9516
	Dtree	0.9329	0.9320	0.9338	0.8658	0.9329
	NB	0.9601	0.9626	0.9321	0.8951	0.9473

HLA-A*23:01	LR	0.9103	0.8898	0.9580	0.8500	0.9241
	SVM	0.9784	0.9322	0.9412	0.8734	0.9367
	Bagging	0.9427	0.8898	0.9496	0.8411	0.9198
	XGBoost	0.9572	0.8898	0.9580	0.8500	0.9241
	KNN	0.9349	0.9153	0.9412	0.8568	0.9283
	Dtree	0.9197	0.8814	0.9580	0.8420	0.9198
	NB	0.9108	0.9322	0.9412	0.8734	0.9367
HLA-A*24:02	LR	0.9913	0.9680	0.9594	0.9275	0.9637
	SVM	0.9848	0.9564	0.9739	0.9305	0.9652
	Bagging	0.9768	0.9622	0.9652	0.9274	0.9637
	XGBoost	0.9813	0.9535	0.9739	0.9276	0.9637
	KNN	0.9652	0.9564	0.9623	0.9187	0.9594
	Dtree	0.9521	0.9331	0.9710	0.9048	0.9521
	NB	0.9771	0.9564	0.9739	0.9305	0.9652
HLA-A*24:06	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-A*26:01	LR	0.9636	0.9231	0.9394	0.8627	0.9313
	SVM	0.9781	0.9231	0.9697	0.8940	0.9466
	Bagging	0.9421	0.9231	0.9697	0.8940	0.9466
	XGBoost	0.9284	0.8769	0.9545	0.8344	0.9160
	KNN	0.9451	0.9231	0.9697	0.8940	0.9466
	Dtree	0.9781	0.9231	0.9697	0.8940	0.9466
	NB	0.9801	0.9385	0.9697	0.9088	0.9542
HLA-A*29:02	LR	0.9770	0.9224	0.9512	0.8741	0.9369
	SVM	0.9539	0.9102	0.9553	0.8664	0.9328
	Bagging	0.9450	0.9265	0.9390	0.8656	0.9328
	XGBoost	0.9674	0.9143	0.9553	0.8704	0.9348
	KNN	0.9310	0.9061	0.9553	0.8625	0.9308
	Dtree	0.9205	0.9061	0.9350	0.8415	0.9206
	NB	0.9403	0.8857	0.9553	0.8431	0.9206
HLA-A*30:01	LR	0.7359	0.6923	0.7750	0.4691	0.7342
	SVM	0.7429	0.8205	0.5750	0.4074	0.6962
	Bagging	0.7231	0.7692	0.6250	0.3981	0.6962
	XGBoost	0.6952	0.7436	0.7500	0.4936	0.7468
	KNN	0.6962	0.8205	0.5750	0.4074	0.6962
	Dtree	0.6846	0.7692	0.6000	0.3743	0.6835
	NB	0.8038	0.8718	0.4500	0.3541	0.6582
HLA-A*30:02	LR	0.9446	0.9437	0.9028	0.8469	0.9231
	SVM	0.9480	0.9296	0.9167	0.8462	0.9231

	Bagging	0.9415	0.8873	0.9167	0.8045	0.9021
	XGBoost	0.9577	0.9014	0.9444	0.8468	0.9231
	KNN	0.9332	0.9437	0.9167	0.8605	0.9301
	Dtree	0.9303	0.9577	0.9028	0.8615	0.9301
	NB	0.9487	0.9577	0.9028	0.8615	0.9301
HLA-A*31:01	LR	0.9680	0.9447	0.8941	0.8397	0.9193
	SVM	0.9333	0.8340	0.8602	0.6945	0.8471
	Bagging	0.4349	0.3489	0.9915	0.4447	0.6709
	XGBoost	0.9600	0.9234	0.9237	0.8471	0.9236
	KNN	0.8907	0.8000	0.9364	0.7436	0.8684
	Dtree	0.9108	0.9106	0.9110	0.8217	0.9108
	NB	0.9652	0.8596	0.9492	0.8121	0.9045
HLA-A*32:01	LR	0.9366	0.8783	0.9224	0.8016	0.9004
	SVM	0.9340	0.8783	0.9224	0.8016	0.9004
	Bagging	0.9070	0.8870	0.8707	0.7577	0.8788
	XGBoost	0.9273	0.8783	0.9397	0.8196	0.9091
	KNN	0.9095	0.8783	0.9310	0.8106	0.9048
	Dtree	0.9046	0.8609	0.9483	0.8125	0.9048
	NB	0.8957	0.8870	0.9052	0.7923	0.8961
HLA-A*33:01	LR	0.9765	1.0000	0.9242	0.9267	0.9620
	SVM	0.9824	1.0000	0.9242	0.9267	0.9620
	Bagging	0.9598	0.9847	0.9167	0.9033	0.9506
	XGBoost	0.9769	1.0000	0.9015	0.9056	0.9506
	KNN	0.9613	1.0000	0.9242	0.9267	0.9620
	Dtree	0.9545	1.0000	0.9091	0.9126	0.9544
	NB	0.9643	0.9924	0.9242	0.9185	0.9582
HLA-A*68:01	LR	0.9845	0.8056	0.9751	0.7922	0.8904
	SVM	0.9551	0.9639	0.9335	0.8978	0.9487
	Bagging	0.9579	0.9611	0.9335	0.8949	0.9473
	XGBoost	0.9686	0.9694	0.9252	0.8955	0.9473
	KNN	0.9494	0.9528	0.9335	0.8864	0.9431
	Dtree	0.9265	0.9361	0.9169	0.8531	0.9265
	NB	0.9261	0.9639	0.9335	0.8978	0.9487
HLA-A*68:02	LR	0.9425	0.9109	0.9079	0.8188	0.9094
	SVM	0.9436	0.9010	0.9046	0.8056	0.9028
	Bagging	0.8845	0.8713	0.8947	0.7663	0.8830
	XGBoost	0.9395	0.8746	0.9079	0.7829	0.8913
	KNN	0.8992	0.8977	0.9079	0.8056	0.9028
	Dtree	0.8798	0.8977	0.8618	0.7600	0.8797
	NB	0.8889	0.9076	0.8980	0.8056	0.9028
HLA-A*69:01	LR	0.9815	0.9600	0.9231	0.8831	0.9412
	SVM	0.9523	0.9600	0.9231	0.8831	0.9412
	Bagging	0.9415	0.9600	0.9231	0.8831	0.9412
	XGBoost	0.9415	0.9600	0.9231	0.8831	0.9412

	KNN	0.9415	0.9600	0.9231	0.8831	0.9412
	Dtree	0.9415	0.9600	0.9231	0.8831	0.9412
	NB	0.9600	1.0000	0.9231	0.9245	0.9608
HLA-B*07:02	LR	0.9727	0.9757	0.9423	0.9185	0.9590
	SVM	0.9854	0.9720	0.9590	0.9311	0.9655
	Bagging	0.9738	0.9776	0.9497	0.9277	0.9637
	XGBoost	0.9847	0.9664	0.9534	0.9199	0.9599
	KNN	0.9671	0.9683	0.9572	0.9255	0.9627
	Dtree	0.9543	0.9552	0.9534	0.9087	0.9543
	NB	0.9573	0.9832	0.9367	0.9209	0.9599
HLA-B*08:01	LR	0.8745	0.8986	0.9429	0.8425	0.9209
	SVM	0.9391	0.8986	0.9286	0.8276	0.9137
	Bagging	0.9484	0.9420	0.8571	0.8017	0.8993
	XGBoost	0.9177	0.8841	0.8714	0.7555	0.8777
	KNN	0.9068	0.9710	0.8571	0.8330	0.9137
	Dtree	0.8996	0.9420	0.8571	0.8017	0.8993
	NB	0.9021	0.9710	0.7714	0.7568	0.8705
HLA-B*13:02	LR	0.9870	0.9048	0.9545	0.8612	0.9302
	SVM	0.9567	1.0000	0.9545	0.9545	0.9767
	Bagging	0.9773	1.0000	0.9545	0.9545	0.9767
	XGBoost	0.9297	0.9048	0.9545	0.8612	0.9302
	KNN	0.9773	1.0000	0.9545	0.9545	0.9767
	Dtree	0.9297	0.9048	0.9545	0.8612	0.9302
	NB	0.9697	0.9524	0.9545	0.9069	0.9535
HLA-B*14:02	LR	0.9282	0.9744	0.9000	0.8760	0.9367
	SVM	0.9250	0.9744	0.9000	0.8760	0.9367
	Bagging	0.8962	0.8974	0.8250	0.7238	0.8608
	XGBoost	0.9391	0.8974	0.8250	0.7238	0.8608
	KNN	0.9333	0.9744	0.9000	0.8760	0.9367
	Dtree	0.8612	0.8974	0.8250	0.7238	0.8608
	NB	0.9141	0.9744	0.9000	0.8760	0.9367
HLA-B*15:01	LR	0.9808	0.9670	0.9444	0.9116	0.9557
	SVM	0.9780	0.9635	0.9479	0.9115	0.9557
	Bagging	0.8142	0.9983	0.5885	0.6431	0.7932
	XGBoost	0.8845	0.9722	0.6632	0.6679	0.8175
	KNN	0.9529	0.9600	0.9427	0.9028	0.9513
	Dtree	0.7835	0.5878	0.9792	0.6163	0.7837
	NB	0.9405	0.9617	0.9479	0.9097	0.9548
HLA-B*18:01	LR	0.9889	1.0000	0.9070	0.9100	0.9529
	SVM	0.9601	1.0000	0.9070	0.9100	0.9529
	Bagging	0.9635	1.0000	0.9070	0.9100	0.9529
	XGBoost	0.9745	1.0000	0.9070	0.9100	0.9529
	KNN	0.9480	1.0000	0.9070	0.9100	0.9529
	Dtree	0.9419	1.0000	0.8837	0.8887	0.9412

	NB	0.9286	1.0000	0.9070	0.9100	0.9529
HLA-B*27:01	LR	0.9833	1.0000	0.9788	0.9790	0.9894
	SVM	0.9967	1.0000	0.9788	0.9790	0.9894
	Bagging	0.9894	0.9947	0.9788	0.9736	0.9867
	XGBoost	0.9984	1.0000	0.9788	0.9790	0.9894
	KNN	0.9894	1.0000	0.9788	0.9790	0.9894
	Dtree	0.9682	0.9787	0.9577	0.9366	0.9682
	NB	0.9894	1.0000	0.9788	0.9790	0.9894
HLA-B*27:02	LR	0.9953	0.9613	0.9945	0.9564	0.9780
	SVM	0.9934	0.9779	0.9945	0.9726	0.9862
	Bagging	0.9831	0.9724	0.9945	0.9672	0.9835
	XGBoost	0.9904	0.9724	0.9945	0.9672	0.9835
	KNN	0.9861	0.9779	0.9945	0.9726	0.9862
	Dtree	0.9779	0.9724	0.9835	0.9560	0.9780
	NB	0.9791	0.9724	0.9945	0.9672	0.9835
HLA-B*27:03	LR	0.9765	0.9574	0.9792	0.9370	0.9684
	SVM	0.9721	0.9574	0.9792	0.9370	0.9684
	Bagging	0.9676	0.9574	0.9792	0.9370	0.9684
	XGBoost	0.9898	0.9574	0.9792	0.9370	0.9684
	KNN	0.9679	0.9574	0.9792	0.9370	0.9684
	Dtree	0.9683	0.9574	0.9792	0.9370	0.9684
	NB	0.9517	0.9574	0.9792	0.9370	0.9684
HLA-B*27:04	LR	0.9822	0.9167	1.0000	0.9204	0.9587
	SVM	0.9962	0.9167	1.0000	0.9204	0.9587
	Bagging	0.9507	0.9333	0.9016	0.8352	0.9174
	XGBoost	0.9683	0.9333	1.0000	0.9359	0.9669
	KNN	0.9667	0.9167	1.0000	0.9204	0.9587
	Dtree	0.9667	0.9333	1.0000	0.9359	0.9669
	NB	0.9787	0.9333	1.0000	0.9359	0.9669
HLA-B*27:05	LR	0.8951	0.7656	0.9005	0.6722	0.8331
	SVM	0.8452	0.7894	0.8563	0.6472	0.8229
	Bagging	0.8199	0.7633	0.8790	0.6466	0.8212
	XGBoost	0.8115	0.7712	0.8778	0.6528	0.8246
	KNN	0.8162	0.8562	0.7749	0.6331	0.8155
	Dtree	0.8206	0.7882	0.8529	0.6425	0.8206
	NB	0.8971	0.8041	0.8371	0.6415	0.8206
HLA-B*27:06	LR	0.9318	0.9400	0.9804	0.9215	0.9604
	SVM	0.9706	0.9400	0.9020	0.8423	0.9208
	Bagging	0.9688	0.9600	0.9804	0.9408	0.9703
	XGBoost	0.9902	0.9600	0.9412	0.9012	0.9505
	KNN	0.9078	0.9400	0.8627	0.8046	0.9010
	Dtree	0.9506	0.9600	0.9412	0.9012	0.9505
	NB	0.9388	0.9400	0.9804	0.9215	0.9604
HLA-B*27:07	LR	0.9975	0.9904	0.9905	0.9809	0.9904

	SVM	0.9983	1.0000	0.9905	0.9905	0.9952
	Bagging	0.9950	0.9904	0.9905	0.9809	0.9904
	XGBoost	0.9989	1.0000	0.9905	0.9905	0.9952
	KNN	0.9950	1.0000	0.9905	0.9905	0.9952
	Dtree	0.9952	1.0000	0.9905	0.9905	0.9952
	NB	0.9918	1.0000	0.9905	0.9905	0.9952
HLA-B*27:08	LR	0.9993	1.0000	0.9626	0.9631	0.9812
	SVM	0.9952	1.0000	0.9533	0.9541	0.9765
	Bagging	0.9901	1.0000	0.9533	0.9541	0.9765
	XGBoost	0.9746	0.9906	0.9252	0.9175	0.9577
	KNN	0.9760	1.0000	0.9533	0.9541	0.9765
	Dtree	0.9813	1.0000	0.9626	0.9631	0.9812
	NB	0.9660	0.9717	0.9533	0.9251	0.9624
HLA-B*27:09	LR	0.9512	0.9682	0.9050	0.8748	0.9365
	SVM	0.7855	0.9909	0.6833	0.7082	0.8367
	Bagging	0.7258	0.9727	0.4570	0.5012	0.7143
	XGBoost	0.8691	0.9727	0.4570	0.5012	0.7143
	KNN	0.6541	0.4136	0.7919	0.2220	0.6032
	Dtree	0.5814	0.9955	0.1674	0.2902	0.5805
	NB	0.6447	1.0000	0.1267	0.2598	0.5624
HLA-B*35:01	LR	0.9406	0.9247	0.9429	0.8678	0.9338
	SVM	0.9602	0.9355	0.9357	0.8712	0.9356
	Bagging	0.9461	0.9247	0.9429	0.8678	0.9338
	XGBoost	0.9636	0.9355	0.9214	0.8570	0.9284
	KNN	0.9406	0.9247	0.9429	0.8678	0.9338
	Dtree	0.9195	0.9462	0.8929	0.8402	0.9195
	NB	0.9280	0.9391	0.9393	0.8784	0.9392
HLA-B*35:03	LR	0.9800	0.9592	0.9600	0.9192	0.9596
	SVM	0.9833	0.9592	0.9600	0.9192	0.9596
	Bagging	0.9669	0.9592	0.9600	0.9192	0.9596
	XGBoost	0.7898	0.9796	0.6000	0.6248	0.7879
	KNN	0.9698	0.9796	0.9600	0.9396	0.9697
	Dtree	0.9596	0.9592	0.9600	0.9192	0.9596
	NB	0.9629	0.9796	0.9400	0.9200	0.9596
HLA-B*35:08	LR	0.9820	0.9565	1.0000	0.9579	0.9785
	SVM	0.9787	0.9565	1.0000	0.9579	0.9785
	Bagging	0.9822	0.9565	1.0000	0.9579	0.9785
	XGBoost	0.9919	0.9565	1.0000	0.9579	0.9785
	KNN	0.9850	0.9565	1.0000	0.9579	0.9785
	Dtree	0.9676	0.9565	0.9787	0.9357	0.9677
	NB	0.9792	0.9565	1.0000	0.9579	0.9785
HLA-B*37:01	LR	0.9983	0.9259	0.9878	0.9158	0.9571
	SVM	0.9889	0.9877	0.9878	0.9755	0.9877
	Bagging	0.9766	0.9383	0.9512	0.8896	0.9448

	XGBoost	0.9925	0.9506	0.9878	0.9393	0.9693
	KNN	0.9569	0.9259	0.9878	0.9158	0.9571
	Dtree	0.9447	0.9383	0.9512	0.8896	0.9448
	NB	0.9971	0.9506	0.9634	0.9142	0.9571
HLA-B*39:01	LR	0.9992	1.0000	0.9808	0.9808	0.9903
	SVM	0.9917	1.0000	0.9808	0.9808	0.9903
	Bagging	0.9783	0.9608	0.9808	0.9419	0.9709
	XGBoost	0.9708	0.9608	0.9808	0.9419	0.9709
	KNN	0.9998	1.0000	0.9808	0.9808	0.9903
	Dtree	0.9904	1.0000	0.9808	0.9808	0.9903
	NB	0.9808	1.0000	0.9808	0.9808	0.9903
HLA-B*40:01	LR	0.9937	0.9690	0.9604	0.9294	0.9647
	SVM	0.9850	0.9690	0.9648	0.9338	0.9669
	Bagging	0.9719	0.9513	0.9604	0.9117	0.9558
	XGBoost	0.9929	0.9646	0.9648	0.9294	0.9647
	KNN	0.9673	0.9735	0.9604	0.9339	0.9669
	Dtree	0.9647	0.9690	0.9604	0.9294	0.9647
	NB	0.9619	0.9735	0.9604	0.9339	0.9669
HLA-B*40:02	LR	0.9766	0.9780	0.9643	0.9423	0.9711
	SVM	0.9837	0.9780	0.9643	0.9423	0.9711
	Bagging	0.9744	0.9780	0.9505	0.9288	0.9642
	XGBoost	0.9886	0.9780	0.9643	0.9423	0.9711
	KNN	0.9728	0.9780	0.9643	0.9423	0.9711
	Dtree	0.9615	0.9752	0.9478	0.9233	0.9615
	NB	0.9582	0.9752	0.9670	0.9423	0.9711
HLA-B*41:01	LR	0.9375	0.9375	1.0000	0.9410	0.9697
	SVM	0.9522	0.9375	1.0000	0.9410	0.9697
	Bagging	0.9596	0.9375	1.0000	0.9410	0.9697
	XGBoost	0.9926	0.9375	1.0000	0.9410	0.9697
	KNN	0.9669	0.9375	1.0000	0.9410	0.9697
	Dtree	0.9688	0.9375	1.0000	0.9410	0.9697
	NB	0.9449	0.9375	1.0000	0.9410	0.9697
HLA-B*44:02	LR	0.9689	0.9515	0.9564	0.9079	0.9539
	SVM	0.9767	0.9539	0.9540	0.9079	0.9539
	Bagging	0.9624	0.9417	0.9564	0.8983	0.9491
	XGBoost	0.9848	0.9539	0.9540	0.9079	0.9539
	KNN	0.9634	0.9539	0.9540	0.9079	0.9539
	Dtree	0.9491	0.9417	0.9564	0.8983	0.9491
	NB	0.9453	0.9539	0.9540	0.9079	0.9539
HLA-B*44:03	LR	0.9887	0.9725	0.9753	0.9479	0.9739
	SVM	0.9802	0.9615	0.9836	0.9454	0.9726
	Bagging	0.9698	0.9725	0.9671	0.9397	0.9698
	XGBoost	0.9922	0.9808	0.9753	0.9561	0.9781
	KNN	0.9747	0.9670	0.9781	0.9452	0.9726

	Dtree	0.9698	0.9725	0.9671	0.9397	0.9698
	NB	0.9623	0.9670	0.9781	0.9452	0.9726
HLA-B*44:27	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*45:01	LR	0.9594	0.9352	0.9541	0.8895	0.9447
	SVM	0.9743	0.9352	0.9633	0.8989	0.9493
	Bagging	0.9427	0.9259	0.9450	0.8711	0.9355
	XGBoost	0.9803	0.9444	0.8624	0.8093	0.9032
	KNN	0.9569	0.9352	0.9633	0.8989	0.9493
	Dtree	0.9354	0.9259	0.9450	0.8711	0.9355
	NB	0.9542	0.9352	0.9633	0.8989	0.9493
HLA-B*46:01	LR	0.9154	0.8947	0.9481	0.8442	0.9216
	SVM	0.9098	0.9211	0.9351	0.8563	0.9281
	Bagging	0.9183	0.7763	0.9481	0.7359	0.8627
	XGBoost	0.9578	0.7763	0.9481	0.7359	0.8627
	KNN	0.9009	0.8421	0.9351	0.7809	0.8889
	Dtree	0.9214	0.8947	0.9481	0.8442	0.9216
	NB	0.9142	0.8947	0.9481	0.8442	0.9216
HLA-B*49:01	LR	0.9792	0.9813	0.9444	0.9262	0.9628
	SVM	0.9713	0.9813	0.9444	0.9262	0.9628
	Bagging	0.9619	0.9907	0.9259	0.9183	0.9581
	XGBoost	0.9596	0.9720	0.9352	0.9076	0.9535
	KNN	0.9618	0.9813	0.9444	0.9262	0.9628
	Dtree	0.9582	0.9720	0.9444	0.9166	0.9581
	NB	0.9630	0.9813	0.9444	0.9262	0.9628
HLA-B*50:01	LR	0.9746	0.9535	0.9545	0.9080	0.9540
	SVM	0.9715	0.9535	0.9545	0.9080	0.9540
	Bagging	0.9752	0.9535	0.9545	0.9080	0.9540
	XGBoost	0.9797	0.9535	0.9545	0.9080	0.9540
	KNN	0.9635	0.9535	0.9545	0.9080	0.9540
	Dtree	0.9656	0.9767	0.9545	0.9313	0.9655
	NB	0.9197	0.9535	0.9545	0.9080	0.9540
HLA-B*51:01	LR	0.9363	0.9024	0.9697	0.8743	0.9362
	SVM	0.9652	0.9024	0.9636	0.8678	0.9331
	Bagging	0.9551	0.9207	0.9394	0.8603	0.9301
	XGBoost	0.9205	0.8841	0.9515	0.8377	0.9179
	KNN	0.9355	0.8841	0.9636	0.8506	0.9240
	Dtree	0.9362	0.9573	0.9152	0.8731	0.9362
	NB	0.9683	0.9024	0.9636	0.8678	0.9331

HLA-B*53:01	LR	0.9463	0.8983	0.9500	0.8497	0.9244
	SVM	0.9675	0.8983	0.9667	0.8674	0.9328
	Bagging	0.9301	0.9153	0.9500	0.8660	0.9328
	XGBoost	0.9089	0.9153	0.9500	0.8660	0.9328
	KNN	0.9326	0.9153	0.9500	0.8660	0.9328
	Dtree	0.9240	0.8814	0.9667	0.8516	0.9244
	NB	0.9112	0.8983	0.9667	0.8674	0.9328
HLA-B*54:01	LR	0.9643	0.9242	0.9552	0.8801	0.9398
	SVM	0.9683	0.9242	0.9552	0.8801	0.9398
	Bagging	0.9555	0.9242	0.9403	0.8647	0.9323
	XGBoost	0.9729	0.9242	0.9552	0.8801	0.9398
	KNN	0.8547	0.9394	0.7164	0.6720	0.8271
	Dtree	0.9323	0.9242	0.9403	0.8647	0.9323
	NB	0.9354	0.9394	0.9552	0.8948	0.9474
HLA-B*56:01	LR	1.0000	0.8333	1.0000	0.8468	0.9178
	SVM	1.0000	0.8056	1.0000	0.8230	0.9041
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	0.9617	1.0000	0.4324	0.5226	0.7123
HLA-B*57:01	LR	0.9578	0.9350	0.9026	0.8380	0.9188
	SVM	0.9265	0.9350	0.8831	0.8191	0.9090
	Bagging	0.8316	0.9821	0.5390	0.5811	0.7604
	XGBoost	0.8383	0.9870	0.2386	0.3401	0.6125
	KNN	0.9144	0.7707	0.9545	0.7379	0.8627
	Dtree	0.9293	0.9171	0.9416	0.8589	0.9293
	NB	0.8623	0.9382	0.6591	0.6219	0.7985
HLA-B*57:03	LR	0.9652	0.8848	0.9541	0.8411	0.9195
	SVM	0.9279	0.6682	0.9587	0.6555	0.8138
	Bagging	0.9582	0.9401	0.9312	0.8713	0.9356
	XGBoost	0.9466	0.9539	0.9358	0.8898	0.9448
	KNN	0.9414	0.9309	0.9495	0.8806	0.9402
	Dtree	0.9357	0.9539	0.9174	0.8719	0.9356
	NB	0.8873	0.8249	0.9404	0.7706	0.8828
HLA-B*58:01	LR	0.9274	0.9242	0.9397	0.8641	0.9320
	SVM	0.9394	0.9141	0.9397	0.8542	0.9270
	Bagging	0.9378	0.9141	0.9296	0.8439	0.9219
	XGBoost	0.9572	0.8990	0.9296	0.8291	0.9144
	KNN	0.9356	0.9242	0.9397	0.8641	0.9320
	Dtree	0.9042	0.8889	0.9196	0.8089	0.9043
	NB	0.9464	0.9242	0.9397	0.8641	0.9320
HLA-C*01:02	LR	0.9492	0.9390	0.8916	0.8313	0.9152
	SVM	0.9414	0.9390	0.8916	0.8313	0.9152

	Bagging	0.9019	0.9512	0.8675	0.8212	0.9091
	XGBoost	0.9506	0.9634	0.8554	0.8232	0.9091
	KNN	0.9174	0.9390	0.8916	0.8313	0.9152
	Dtree	0.9092	0.9268	0.8916	0.8188	0.9091
	NB	0.9164	0.9390	0.9036	0.8430	0.9212
HLA-C*02:02	LR	0.9070	0.9187	0.9032	0.8220	0.9109
	SVM	0.9679	0.9268	0.9032	0.8302	0.9150
	Bagging	0.9170	0.9187	0.8871	0.8061	0.9028
	XGBoost	0.9579	0.9350	0.8790	0.8151	0.9069
	KNN	0.9249	0.9268	0.9032	0.8302	0.9150
	Dtree	0.9029	0.9187	0.8871	0.8061	0.9028
	NB	0.8859	0.9106	0.9032	0.8138	0.9069
HLA-C*03:03	LR	0.9360	0.9014	0.9722	0.8762	0.9371
	SVM	0.9435	0.9014	0.9722	0.8762	0.9371
	Bagging	0.9345	0.9014	0.9722	0.8762	0.9371
	XGBoost	0.9408	0.9014	0.9444	0.8468	0.9231
	KNN	0.9368	0.9014	0.9722	0.8762	0.9371
	Dtree	0.9368	0.9014	0.9722	0.8762	0.9371
	NB	0.9032	0.9014	0.9306	0.8325	0.9161
HLA-C*03:04	LR	0.9661	0.8902	0.9639	0.8567	0.9273
	SVM	0.9827	0.8902	0.9639	0.8567	0.9273
	Bagging	0.9271	0.9024	0.9518	0.8555	0.9273
	XGBoost	0.9807	0.9024	0.9518	0.8555	0.9273
	KNN	0.9270	0.8902	0.9639	0.8567	0.9273
	Dtree	0.9271	0.9024	0.9518	0.8555	0.9273
	NB	0.9074	0.8902	0.9639	0.8567	0.9273
HLA-C*04:01	LR	0.9598	0.7619	0.9914	0.7742	0.8769
	SVM	0.8968	0.5281	0.9914	0.5866	0.7603
	Bagging	0.9195	0.8658	0.9009	0.7672	0.8834
	XGBoost	0.9583	0.6710	0.9784	0.6828	0.8251
	KNN	0.9105	0.8398	0.9612	0.8072	0.9006
	Dtree	0.8875	0.8225	0.9526	0.7819	0.8877
	NB	0.9231	0.6277	0.9871	0.6591	0.8078
HLA-C*05:01	LR	0.9771	0.8983	0.9832	0.8850	0.9409
	SVM	0.9290	0.9068	0.9748	0.8838	0.9409
	Bagging	0.9549	0.8983	0.9832	0.8850	0.9409
	XGBoost	0.9677	0.8983	0.9748	0.8759	0.9367
	KNN	0.9419	0.8983	0.9832	0.8850	0.9409
	Dtree	0.9323	0.8983	0.9664	0.8669	0.9325
	NB	0.9643	0.9068	0.9748	0.8838	0.9409
HLA-C*06:02	LR	0.9427	0.9072	0.8878	0.7951	0.8974
	SVM	0.9107	0.9072	0.8878	0.7951	0.8974
	Bagging	0.8905	0.7938	0.9082	0.7069	0.8513
	XGBoost	0.9379	0.8969	0.8878	0.7847	0.8923

	KNN	0.8961	0.9072	0.8878	0.7951	0.8974
	Dtree	0.8667	0.8763	0.8571	0.7335	0.8667
	NB	0.8653	0.9072	0.8878	0.7951	0.8974
HLA-C*07:01	LR	0.9764	0.9750	0.9506	0.9258	0.9627
	SVM	0.9849	0.9750	0.9506	0.9258	0.9627
	Bagging	0.9627	0.9750	0.9506	0.9258	0.9627
	XGBoost	0.9788	0.9625	0.9506	0.9131	0.9565
	KNN	0.9563	0.9750	0.9383	0.9137	0.9565
	Dtree	0.9504	0.9625	0.9383	0.9009	0.9503
	NB	0.9594	0.9750	0.9506	0.9258	0.9627
HLA-C*07:02	LR	0.9698	0.8909	0.9464	0.8390	0.9189
	SVM	0.9659	0.9273	0.9286	0.8558	0.9279
	Bagging	0.9153	0.8545	0.9821	0.8444	0.9189
	XGBoost	0.9696	0.8545	0.9821	0.8444	0.9189
	KNN	0.7557	0.6364	0.8750	0.5272	0.7568
	Dtree	0.9183	0.8545	0.9821	0.8444	0.9189
	NB	0.9347	0.6727	0.9643	0.6672	0.8198
HLA-C*07:04	LR	0.9583	0.9688	0.8485	0.8219	0.9077
	SVM	0.8845	1.0000	0.7879	0.8040	0.8923
	Bagging	0.9233	0.9688	0.8788	0.8500	0.9231
	XGBoost	0.9238	0.9688	0.8788	0.8500	0.9231
	KNN	0.8939	1.0000	0.7879	0.8040	0.8923
	Dtree	0.9238	0.9688	0.8788	0.8500	0.9231
	NB	0.8977	0.9375	0.8182	0.7600	0.8769
HLA-C*08:02	LR	0.9787	0.9821	0.9292	0.9124	0.9556
	SVM	0.9885	0.9732	0.9381	0.9117	0.9556
	Bagging	0.9654	0.9464	0.9558	0.9023	0.9511
	XGBoost	0.9855	0.9464	0.9469	0.8933	0.9467
	KNN	0.9632	0.9732	0.9381	0.9117	0.9556
	Dtree	0.9556	0.9732	0.9381	0.9117	0.9556
	NB	0.9610	0.9732	0.9381	0.9117	0.9556
HLA-C*14:02	LR	0.9899	0.9531	0.9846	0.9384	0.9690
	SVM	0.9837	0.8906	0.9846	0.8797	0.9380
	Bagging	0.9714	0.4844	0.9846	0.5429	0.7364
	XGBoost	0.9645	0.4844	0.9846	0.5429	0.7364
	KNN	0.9611	0.9375	0.9846	0.9234	0.9612
	Dtree	0.9376	0.8906	0.9846	0.8797	0.9380
	NB	0.9825	1.0000	0.9692	0.9695	0.9845
HLA-C*16:01	LR	0.9431	0.9348	0.8511	0.7880	0.8925
	SVM	0.9047	0.8913	0.8936	0.7849	0.8925
	Bagging	0.9216	0.9348	0.8511	0.7880	0.8925
	XGBoost	0.9091	0.8913	0.8936	0.7849	0.8925
	KNN	0.9022	0.9130	0.8936	0.8067	0.9032
	Dtree	0.9033	0.9130	0.8936	0.8067	0.9032

		NB	0.9239	0.9348	0.8511	0.7880	0.8925
11	HLA-A*01:01	LR	0.9694	0.9740	0.9397	0.9142	0.9568
		SVM	0.9813	0.9740	0.9397	0.9142	0.9568
		Bagging	0.9643	0.9610	0.9440	0.9051	0.9525
		XGBoost	0.9864	0.9177	0.9655	0.8844	0.9417
		KNN	0.9663	0.9740	0.9440	0.9184	0.9590
		Dtree	0.9503	0.9524	0.9483	0.9007	0.9503
		NB	0.9302	0.9740	0.9440	0.9184	0.9590
	HLA-A*02:01	LR	0.9305	0.9163	0.8966	0.8131	0.9065
		SVM	0.9121	0.9243	0.8887	0.8135	0.9065
		Bagging	0.9044	0.8466	0.9245	0.7735	0.8856
		XGBoost	0.9317	0.9044	0.8887	0.7931	0.8965
		KNN	0.9024	0.9223	0.8787	0.8018	0.9005
		Dtree	0.8846	0.9124	0.8569	0.7704	0.8846
		NB	0.9291	0.9143	0.8986	0.8130	0.9065
	HLA-A*02:03	LR	0.8889	0.8077	0.9630	0.7819	0.8868
		SVM	0.9288	0.8462	0.9259	0.7754	0.8868
		Bagging	0.8803	0.8462	0.9259	0.7754	0.8868
		XGBoost	0.8967	0.8077	0.9630	0.7819	0.8868
		KNN	0.8839	0.8077	0.9630	0.7819	0.8868
		Dtree	0.8860	0.8462	0.9259	0.7754	0.8868
		NB	0.9174	0.8077	0.9630	0.7819	0.8868
	HLA-A*02:04	LR	0.9609	0.9655	0.9667	0.9322	0.9661
		SVM	0.9747	0.9655	0.9667	0.9322	0.9661
		Bagging	0.9644	0.9655	0.9333	0.8989	0.9492
		XGBoost	0.9891	0.9655	0.9667	0.9322	0.9661
		KNN	0.9661	0.9655	0.9667	0.9322	0.9661
		Dtree	0.9494	0.9655	0.9333	0.8989	0.9492
		NB	0.9483	0.9655	0.9667	0.9322	0.9661
	HLA-A*02:05	LR	0.9804	0.9412	0.9444	0.8856	0.9429
		SVM	0.9510	0.9412	0.9444	0.8856	0.9429
		Bagging	0.9314	0.8824	0.9444	0.8295	0.9143
		XGBoost	0.9428	0.9412	0.9444	0.8856	0.9429
		KNN	0.9428	0.9412	0.9444	0.8856	0.9429
		Dtree	0.9428	0.9412	0.9444	0.8856	0.9429
		NB	0.9216	0.9412	0.9444	0.8856	0.9429
	HLA-A*02:07	LR	0.9122	0.8947	0.9351	0.8307	0.9150
		SVM	0.9554	0.8947	0.9351	0.8307	0.9150
		Bagging	0.9505	0.8947	0.9481	0.8442	0.9216
		XGBoost	0.9123	0.8947	0.9481	0.8442	0.9216
		KNN	0.9176	0.8947	0.9351	0.8307	0.9150
		Dtree	0.9149	0.8947	0.9351	0.8307	0.9150
		NB	0.9564	0.8947	0.9481	0.8442	0.9216
	HLA-A*03:01	LR	0.9472	0.9394	0.9639	0.9036	0.9517

	SVM	0.9656	0.9515	0.9518	0.9033	0.9517
	Bagging	0.9712	0.9212	0.9639	0.8860	0.9426
	XGBoost	0.9733	0.9455	0.9578	0.9034	0.9517
	KNN	0.9612	0.9091	0.9578	0.8681	0.9335
	Dtree	0.9335	0.9212	0.9458	0.8673	0.9335
	NB	0.9435	0.9515	0.9518	0.9033	0.9517
HLA-A*11:01	LR	0.9408	0.2532	0.9957	0.3720	0.6253
	SVM	0.9800	0.9571	0.9786	0.9360	0.9679
	Bagging	0.9722	0.7983	0.9915	0.8052	0.8951
	XGBoost	0.9796	0.9313	0.9829	0.9155	0.9572
	KNN	0.9366	0.8884	0.9786	0.8707	0.9336
	Dtree	0.8949	0.7983	0.9915	0.8052	0.8951
	NB	0.8842	0.9871	0.5214	0.5743	0.7537
HLA-A*23:01	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	0.9808	0.9615	1.0000	0.9629	0.9811
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-A*24:02	LR	0.9947	0.9677	0.9733	0.9410	0.9705
	SVM	0.9876	0.9677	0.9733	0.9410	0.9705
	Bagging	0.9811	0.9731	0.9733	0.9464	0.9732
	XGBoost	0.9784	0.9839	0.8824	0.8705	0.9330
	KNN	0.9716	0.9462	0.9786	0.9254	0.9625
	Dtree	0.9732	0.9839	0.9626	0.9466	0.9732
	NB	0.9735	0.9677	0.9733	0.9410	0.9705
HLA-A*24:06	LR	0.9342	0.8421	0.9500	0.7984	0.8974
	SVM	0.9316	0.8421	0.9500	0.7984	0.8974
	Bagging	0.9092	0.8947	0.9000	0.7947	0.8974
	XGBoost	0.8763	0.8947	0.9000	0.7947	0.8974
	KNN	0.8961	0.8421	0.9500	0.7984	0.8974
	Dtree	0.8961	0.8421	0.9500	0.7984	0.8974
	NB	0.9395	0.8421	0.9500	0.7984	0.8974
HLA-A*29:02	LR	0.9785	0.9574	0.9579	0.9153	0.9577
	SVM	0.9823	0.9574	0.9579	0.9153	0.9577
	Bagging	0.9634	0.9468	0.9579	0.9048	0.9524
	XGBoost	0.9800	0.9468	0.9579	0.9048	0.9524
	KNN	0.9614	0.9574	0.9684	0.9260	0.9630
	Dtree	0.9471	0.9468	0.9474	0.8942	0.9471
	NB	0.9611	0.9574	0.9579	0.9153	0.9577
HLA-A*31:01	LR	0.9421	0.9697	0.8806	0.8532	0.9248
	SVM	0.9532	0.9848	0.8657	0.8560	0.9248
	Bagging	0.9440	0.9545	0.8955	0.8512	0.9248

	XGBoost	0.9664	0.9545	0.8955	0.8512	0.9248
	KNN	0.9155	0.9848	0.8507	0.8425	0.9173
	Dtree	0.9175	0.9394	0.8955	0.8355	0.9173
	NB	0.9469	0.9545	0.8507	0.8091	0.9023
HLA-A*32:01	LR	0.9745	0.9200	0.9804	0.9025	0.9505
	SVM	0.9671	0.9200	0.9804	0.9025	0.9505
	Bagging	0.9567	0.8400	0.9804	0.8296	0.9109
	XGBoost	0.9559	0.8400	0.9412	0.7858	0.8911
	KNN	0.9502	0.9200	0.9804	0.9025	0.9505
	Dtree	0.9402	0.9000	0.9804	0.8839	0.9406
	NB	0.9306	0.9000	0.9412	0.8422	0.9208
HLA-A*68:01	LR	0.9987	1.0000	0.9455	0.9464	0.9725
	SVM	0.9848	1.0000	0.9455	0.9464	0.9725
	Bagging	0.9727	1.0000	0.9455	0.9464	0.9725
	XGBoost	0.9985	1.0000	0.9455	0.9464	0.9725
	KNN	0.9727	1.0000	0.9455	0.9464	0.9725
	Dtree	0.9727	1.0000	0.9455	0.9464	0.9725
	NB	0.9904	1.0000	0.9455	0.9464	0.9725
HLA-A*68:02	LR	0.9274	0.8714	0.8592	0.7306	0.8652
	SVM	0.8740	0.8714	0.8592	0.7306	0.8652
	Bagging	0.9138	0.8143	0.9437	0.7649	0.8794
	XGBoost	0.8815	0.8571	0.8592	0.7163	0.8582
	KNN	0.8785	0.8286	0.9296	0.7625	0.8794
	Dtree	0.8438	0.8143	0.8732	0.6889	0.8440
	NB	0.8646	0.8571	0.9155	0.7742	0.8865
HLA-B*07:02	LR	0.9830	0.9375	0.9707	0.9087	0.9541
	SVM	0.9811	0.9228	0.9817	0.9061	0.9523
	Bagging	0.9701	0.8934	0.9927	0.8906	0.9431
	XGBoost	0.9748	0.9301	0.9670	0.8978	0.9486
	KNN	0.9633	0.9301	0.9744	0.9055	0.9523
	Dtree	0.9541	0.9375	0.9707	0.9087	0.9541
	NB	0.9809	0.8971	0.9927	0.8940	0.9450
HLA-B*08:01	LR	0.9287	0.9697	0.8824	0.8543	0.9254
	SVM	0.9608	0.9697	0.8824	0.8543	0.9254
	Bagging	0.9385	0.9697	0.8824	0.8543	0.9254
	XGBoost	0.9234	0.9697	0.8824	0.8543	0.9254
	KNN	0.9260	0.9697	0.8824	0.8543	0.9254
	Dtree	0.9260	0.9697	0.8824	0.8543	0.9254
	NB	0.9314	0.9697	0.8824	0.8543	0.9254
HLA-B*15:01	LR	0.9545	0.8430	0.9866	0.8386	0.9150
	SVM	0.9560	0.8341	0.8973	0.7329	0.8658
	Bagging	0.9424	0.7892	0.9866	0.7917	0.8881
	XGBoost	0.9554	0.7668	0.9821	0.7672	0.8747
	KNN	0.8923	0.8117	0.9866	0.8110	0.8993

	Dtree	0.8588	0.7444	0.9732	0.7375	0.8591
	NB	0.9258	0.7937	0.9866	0.7955	0.8904
HLA-B*27:01	LR	0.9931	0.9636	0.9910	0.9551	0.9774
	SVM	0.9923	0.9727	1.0000	0.9732	0.9864
	Bagging	0.9955	0.9727	0.9820	0.9548	0.9774
	XGBoost	0.9987	0.9727	1.0000	0.9732	0.9864
	KNN	0.9864	0.9727	1.0000	0.9732	0.9864
	Dtree	0.9909	0.9818	1.0000	0.9821	0.9910
	NB	0.9826	0.9727	1.0000	0.9732	0.9864
HLA-B*27:02	LR	0.9942	0.9915	0.9915	0.9830	0.9915
	SVM	0.9981	0.9915	0.9915	0.9830	0.9915
	Bagging	0.9997	1.0000	0.9831	0.9831	0.9915
	XGBoost	0.9949	0.9915	0.9746	0.9661	0.9830
	KNN	0.9912	0.9915	0.9915	0.9830	0.9915
	Dtree	0.9915	0.9829	1.0000	0.9831	0.9915
	NB	0.9883	0.9915	0.9915	0.9830	0.9915
HLA-B*27:03	LR	0.9737	1.0000	0.9211	0.9230	0.9600
	SVM	0.9716	1.0000	0.9474	0.9480	0.9733
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	0.9737	1.0000	0.9474	0.9480	0.9733
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*27:04	LR	0.9487	0.9615	0.9630	0.9245	0.9623
	SVM	0.9872	0.9615	0.9630	0.9245	0.9623
	Bagging	0.9765	0.9615	0.9630	0.9245	0.9623
	XGBoost	0.9509	0.9615	0.9630	0.9245	0.9623
	KNN	0.9580	0.9615	0.9630	0.9245	0.9623
	Dtree	0.9067	0.9615	0.8519	0.8169	0.9057
	NB	0.9744	0.9615	0.9259	0.8875	0.9434
HLA-B*27:05	LR	0.8716	0.7705	0.8479	0.6203	0.8092
	SVM	0.8244	0.7774	0.8393	0.6179	0.8084
	Bagging	0.8045	0.7894	0.8154	0.6050	0.8024
	XGBoost	0.8083	0.7757	0.8427	0.6198	0.8092
	KNN	0.8064	0.7791	0.8342	0.6142	0.8067
	Dtree	0.7896	0.7928	0.7863	0.5791	0.7896
	NB	0.7990	0.7877	0.8239	0.6120	0.8058
HLA-B*27:06	LR	0.9738	1.0000	0.9231	0.9245	0.9608
	SVM	0.9354	1.0000	0.9231	0.9245	0.9608
	Bagging	0.9808	1.0000	0.9231	0.9245	0.9608
	XGBoost	0.9662	1.0000	0.9231	0.9245	0.9608
	KNN	0.9615	1.0000	0.9231	0.9245	0.9608
	Dtree	0.9615	1.0000	0.9231	0.9245	0.9608
	NB	0.9862	1.0000	0.9231	0.9245	0.9608

HLA-B*27:07	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	0.9667	1.0000	0.9675	0.9835
	XGBoost	1.0000	1.0000	0.9836	0.9836	0.9917
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	0.9918	1.0000	0.9836	0.9836	0.9917
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*27:08	LR	0.9872	0.9865	1.0000	0.9867	0.9933
	SVM	0.9935	0.9865	0.9867	0.9732	0.9866
	Bagging	0.9927	0.9865	0.9733	0.9598	0.9799
	XGBoost	0.9991	0.9865	0.9733	0.9598	0.9799
	KNN	0.9930	0.9865	1.0000	0.9867	0.9933
	Dtree	0.9798	0.9730	0.9867	0.9598	0.9799
	NB	0.9941	0.9865	0.9867	0.9732	0.9866
HLA-B*27:09	LR	0.9683	0.9433	0.9366	0.8799	0.9399
	SVM	0.9680	0.9433	0.9437	0.8869	0.9435
	Bagging	0.9467	0.9291	0.9366	0.8657	0.9329
	XGBoost	0.9715	0.9362	0.9507	0.8870	0.9435
	KNN	0.9366	0.9433	0.9225	0.8659	0.9329
	Dtree	0.9116	0.8936	0.9296	0.8238	0.9117
	NB	0.9212	0.9433	0.9296	0.8729	0.9364
HLA-B*35:01	LR	0.9463	0.8450	0.9538	0.8039	0.8996
	SVM	0.6029	0.1860	1.0000	0.3208	0.5946
	Bagging	0.9463	0.9302	0.9077	0.8381	0.9189
	XGBoost	0.9465	0.8605	0.9154	0.7771	0.8880
	KNN	0.8984	0.9302	0.8692	0.8008	0.8996
	Dtree	0.8763	0.8372	0.9154	0.7551	0.8764
	NB	0.4409	0.1473	1.0000	0.2825	0.5753
HLA-B*35:03	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	0.9333	0.9344	0.9661
	Bagging	0.9977	0.9655	1.0000	0.9666	0.9831
	XGBoost	0.9747	1.0000	0.9333	0.9344	0.9661
	KNN	0.9667	1.0000	0.9333	0.9344	0.9661
	Dtree	0.9667	1.0000	0.9333	0.9344	0.9661
	NB	1.0000	0.9655	1.0000	0.9666	0.9831
HLA-B*35:08	LR	0.9683	0.9630	1.0000	0.9642	0.9818
	SVM	0.9881	0.9630	1.0000	0.9642	0.9818
	Bagging	0.9802	0.8519	1.0000	0.8633	0.9273
	XGBoost	0.9861	0.8519	1.0000	0.8633	0.9273
	KNN	0.9815	0.9630	1.0000	0.9642	0.9818
	Dtree	0.9259	0.8519	1.0000	0.8633	0.9273
	NB	0.9683	0.9630	1.0000	0.9642	0.9818
HLA-B*37:01	LR	0.9857	0.9286	1.0000	0.9330	0.9655
	SVM	0.9810	0.9286	1.0000	0.9330	0.9655

	Bagging	0.9643	0.9286	1.0000	0.9330	0.9655
	XGBoost	0.9643	0.9286	1.0000	0.9330	0.9655
	KNN	0.9643	0.9286	1.0000	0.9330	0.9655
	Dtree	0.9643	0.9286	1.0000	0.9330	0.9655
	NB	0.9810	0.9286	1.0000	0.9330	0.9655
HLA-B*39:01	LR	0.9983	1.0000	0.9714	0.9714	0.9855
	SVM	0.9992	1.0000	0.9714	0.9714	0.9855
	Bagging	0.9710	0.9706	0.9714	0.9420	0.9710
	XGBoost	0.9857	1.0000	0.9714	0.9714	0.9855
	KNN	0.9857	1.0000	0.9714	0.9714	0.9855
	Dtree	0.9857	1.0000	0.9714	0.9714	0.9855
	NB	0.9983	1.0000	0.9714	0.9714	0.9855
HLA-B*40:01	LR	0.9835	0.9909	0.9820	0.9729	0.9864
	SVM	0.9921	0.9909	0.9820	0.9729	0.9864
	Bagging	0.9910	0.9909	0.9910	0.9819	0.9910
	XGBoost	0.9891	0.9909	0.9730	0.9640	0.9819
	KNN	0.9910	0.9909	0.9910	0.9819	0.9910
	Dtree	0.9910	0.9909	0.9910	0.9819	0.9910
	NB	0.9845	0.9909	0.9910	0.9819	0.9910
HLA-B*40:02	LR	0.9919	0.9862	0.9795	0.9657	0.9828
	SVM	0.9882	0.9862	0.9795	0.9657	0.9828
	Bagging	0.9765	0.9586	0.9726	0.9314	0.9656
	XGBoost	0.9926	0.9862	0.9726	0.9589	0.9794
	KNN	0.9712	0.9310	0.9726	0.9045	0.9519
	Dtree	0.9760	0.9862	0.9658	0.9521	0.9759
	NB	0.9815	0.9862	0.9795	0.9657	0.9828
HLA-B*44:02	LR	0.9769	0.9412	0.9947	0.9373	0.9680
	SVM	0.9870	0.9626	0.9734	0.9361	0.9680
	Bagging	0.9767	0.9465	0.9787	0.9258	0.9627
	XGBoost	0.9859	0.9465	0.9840	0.9313	0.9653
	KNN	0.9720	0.9626	0.9734	0.9361	0.9680
	Dtree	0.9573	0.9519	0.9628	0.9147	0.9573
	NB	0.9671	0.9626	0.9734	0.9361	0.9680
HLA-B*44:03	LR	0.9975	0.9728	0.9932	0.9663	0.9831
	SVM	0.9949	0.9728	0.9932	0.9663	0.9831
	Bagging	0.9912	0.9728	0.9932	0.9663	0.9831
	XGBoost	0.9972	0.9728	0.9932	0.9663	0.9831
	KNN	0.9826	0.9728	0.9932	0.9663	0.9831
	Dtree	0.9796	0.9728	0.9865	0.9594	0.9797
	NB	0.9771	0.9728	0.9932	0.9663	0.9831
HLA-B*45:01	LR	0.9788	0.9677	0.9688	0.9365	0.9683
	SVM	0.9748	0.9355	0.9688	0.9051	0.9524
	Bagging	0.9677	0.9355	1.0000	0.9383	0.9683
	XGBoost	0.9693	0.9032	0.9688	0.8746	0.9365

	KNN	0.9677	0.9355	1.0000	0.9383	0.9683
	Dtree	0.9204	0.9032	0.9375	0.8416	0.9206
	NB	0.9677	0.8387	1.0000	0.8517	0.9206
HLA-B*46:01	LR	0.9532	0.8889	0.9474	0.8387	0.9189
	SVM	0.8129	0.7222	0.7368	0.4591	0.7297
	Bagging	0.9196	0.9444	0.8947	0.8392	0.9189
	XGBoost	0.9196	0.9444	0.8947	0.8392	0.9189
	KNN	0.8348	0.7222	0.9474	0.6901	0.8378
	Dtree	0.9196	0.9444	0.8947	0.8392	0.9189
	NB	0.9401	0.8889	0.9474	0.8387	0.9189
HLA-B*49:01	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*51:01	LR	0.9547	0.9556	0.9670	0.9227	0.9613
	SVM	0.9709	0.9444	0.9670	0.9118	0.9558
	Bagging	0.9681	0.9333	0.9451	0.8785	0.9392
	XGBoost	0.9673	0.9556	0.9560	0.9116	0.9558
	KNN	0.9597	0.9556	0.9670	0.9227	0.9613
	Dtree	0.9613	0.9556	0.9670	0.9227	0.9613
	NB	0.9807	0.9444	0.9670	0.9118	0.9558
HLA-B*54:01	LR	0.9602	0.9333	0.9355	0.8688	0.9344
	SVM	0.9860	0.9333	0.9355	0.8688	0.9344
	Bagging	0.9527	0.9000	0.9355	0.8364	0.9180
	XGBoost	0.9462	0.9000	0.9355	0.8364	0.9180
	KNN	0.9478	0.9333	0.9355	0.8688	0.9344
	Dtree	0.9172	0.8667	0.9677	0.8398	0.9180
	NB	0.9892	0.9333	0.9355	0.8688	0.9344
HLA-B*56:01	LR	1.0000	0.3750	1.0000	0.4859	0.6970
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	0.9375	0.8125	1.0000	0.8310	0.9091
	XGBoost	0.9063	0.8125	1.0000	0.8310	0.9091
	KNN	0.7500	0.5000	1.0000	0.5831	0.7576
	Dtree	0.9063	0.8125	1.0000	0.8310	0.9091
	NB	1.0000	0.8750	1.0000	0.8848	0.9394
HLA-B*57:01	LR	0.9659	0.9219	0.9549	0.8773	0.9384
	SVM	0.9683	0.9184	0.9584	0.8775	0.9384
	Bagging	0.9531	0.9149	0.9601	0.8760	0.9376
	XGBoost	0.9676	0.9253	0.9445	0.8701	0.9350
	KNN	0.9418	0.9271	0.9480	0.8753	0.9376
	Dtree	0.9159	0.9201	0.9116	0.8318	0.9159

	NB	0.9453	0.9184	0.9601	0.8793	0.9393
HLA-B*57:03	LR	0.9629	0.9760	0.9464	0.9228	0.9612
	SVM	0.9860	0.9581	0.9702	0.9284	0.9642
	Bagging	0.9793	0.9521	0.9643	0.9165	0.9582
	XGBoost	0.9817	0.9701	0.9524	0.9225	0.9612
	KNN	0.9655	0.9641	0.9405	0.9047	0.9522
	Dtree	0.9434	0.9760	0.9107	0.8885	0.9433
	NB	0.9675	0.9760	0.9524	0.9286	0.9642
HLA-B*58:01	LR	0.9796	0.9612	0.9712	0.9324	0.9662
	SVM	0.9694	0.9515	0.9712	0.9229	0.9614
	Bagging	0.9706	0.9709	0.9519	0.9229	0.9614
	XGBoost	0.9814	0.9709	0.9712	0.9420	0.9710
	KNN	0.9601	0.9515	0.9712	0.9229	0.9614
	Dtree	0.9614	0.9612	0.9615	0.9227	0.9614
	NB	0.9624	0.9709	0.9712	0.9420	0.9710
HLA-C*01:02	LR	0.8662	0.7045	0.9556	0.6833	0.8315
	SVM	0.8778	0.7045	0.9556	0.6833	0.8315
	Bagging	0.9056	0.7045	0.9556	0.6833	0.8315
	XGBoost	0.8881	0.7045	0.9556	0.6833	0.8315
	KNN	0.8770	0.7500	0.9556	0.7222	0.8539
	Dtree	0.8081	0.7273	0.8889	0.6251	0.8090
	NB	0.8462	0.7500	0.9556	0.7222	0.8539
HLA-C*02:02	LR	0.9929	0.8462	1.0000	0.8585	0.9245
	SVM	0.9900	0.8077	1.0000	0.8255	0.9057
	Bagging	0.9231	0.7308	1.0000	0.7618	0.8679
	XGBoost	0.8939	0.7692	1.0000	0.7933	0.8868
	KNN	0.9231	0.8462	1.0000	0.8585	0.9245
	Dtree	0.8654	0.7308	1.0000	0.7618	0.8679
	NB	0.9929	0.8462	1.0000	0.8585	0.9245
HLA-C*03:03	LR	0.9500	0.9000	0.9524	0.8544	0.9268
	SVM	0.9548	0.9000	0.9048	0.8048	0.9024
	Bagging	0.9440	0.9000	0.9524	0.8544	0.9268
	XGBoost	0.9393	0.9000	0.9524	0.8544	0.9268
	KNN	0.8726	0.7500	0.9524	0.7197	0.8537
	Dtree	0.9262	0.9000	0.9524	0.8544	0.9268
	NB	0.9167	0.9500	0.9048	0.8548	0.9268
HLA-C*03:04	LR	0.9831	0.9600	0.9231	0.8831	0.9412
	SVM	0.9677	0.9600	0.9231	0.8831	0.9412
	Bagging	0.9385	0.9200	0.9231	0.8431	0.9216
	XGBoost	0.9923	0.9200	1.0000	0.9243	0.9608
	KNN	0.9369	0.9600	0.9231	0.8831	0.9412
	Dtree	0.9215	0.9200	0.9231	0.8431	0.9216
	NB	0.9323	0.9600	0.9231	0.8831	0.9412
HLA-C*04:01	LR	0.8339	0.8125	0.7231	0.5375	0.7674

	SVM	0.8272	0.8438	0.7385	0.5852	0.7907
	Bagging	0.8353	0.8438	0.7231	0.5707	0.7829
	XGBoost	0.8113	0.8281	0.7385	0.5686	0.7829
	KNN	0.7891	0.8438	0.7385	0.5852	0.7907
	Dtree	0.7834	0.8438	0.7231	0.5707	0.7829
	NB	0.7959	0.8438	0.7385	0.5852	0.7907
HLA-C*05:01	LR	0.9661	0.9500	0.9836	0.9344	0.9669
	SVM	0.9585	0.9500	0.9836	0.9344	0.9669
	Bagging	0.9706	0.9167	0.9672	0.8853	0.9421
	XGBoost	0.9743	0.9333	0.9672	0.9013	0.9504
	KNN	0.9668	0.9500	0.9836	0.9344	0.9669
	Dtree	0.9668	0.9500	0.9836	0.9344	0.9669
	NB	0.9768	0.9500	0.9836	0.9344	0.9669
HLA-C*06:02	LR	0.8278	0.8000	0.8333	0.6338	0.8169
	SVM	0.8024	0.8286	0.8333	0.6619	0.8310
	Bagging	0.8294	0.8571	0.7778	0.6364	0.8169
	XGBoost	0.8583	0.8571	0.8056	0.6632	0.8310
	KNN	0.8214	0.8286	0.8333	0.6619	0.8310
	Dtree	0.8024	0.7714	0.8333	0.6062	0.8028
	NB	0.8837	0.8286	0.8333	0.6619	0.8310
HLA-C*07:01	LR	0.9657	0.8293	1.0000	0.8431	0.9157
	SVM	0.9233	0.8293	0.9762	0.8155	0.9036
	Bagging	0.9268	0.7561	1.0000	0.7815	0.8795
	XGBoost	0.8902	0.7805	1.0000	0.8017	0.8916
	KNN	0.9027	0.8293	0.9762	0.8155	0.9036
	Dtree	0.9024	0.8049	1.0000	0.8223	0.9036
	NB	0.9036	0.6829	1.0000	0.7222	0.8434
HLA-C*07:02	LR	0.9071	0.9500	0.7143	0.6807	0.8293
	SVM	0.9333	0.9500	0.7143	0.6807	0.8293
	Bagging	0.9024	0.8500	0.9048	0.7566	0.8780
	XGBoost	0.9274	0.9500	0.7143	0.6807	0.8293
	KNN	0.8929	0.9000	0.9048	0.8048	0.9024
	Dtree	0.8786	0.9000	0.8571	0.7571	0.8780
	NB	0.8667	0.9500	0.7143	0.6807	0.8293
HLA-C*08:02	LR	0.9645	0.8333	0.9677	0.8098	0.9016
	SVM	0.9892	0.9333	0.9677	0.9020	0.9508
	Bagging	0.9194	0.8333	0.8710	0.7051	0.8525
	XGBoost	0.9591	0.9333	0.9677	0.9020	0.9508
	KNN	0.9753	0.9667	0.9677	0.9344	0.9672
	Dtree	0.9339	0.9000	0.9677	0.8706	0.9344
	NB	0.9672	0.9667	0.9677	0.9344	0.9672
HLA-C*16:01	LR	0.9381	1.0000	0.8667	0.8708	0.9310
	SVM	0.9381	1.0000	0.8000	0.8117	0.8966
	Bagging	0.9333	1.0000	0.8667	0.8708	0.9310

		XGBoost	0.9452	1.0000	0.8667	0.8708	0.9310
		KNN	0.8929	1.0000	0.8000	0.8117	0.8966
		Dtree	0.9333	1.0000	0.8667	0.8708	0.9310
		NB	0.8905	0.9286	0.8667	0.7952	0.8966
12	HLA-A*01:01	LR	0.9514	0.9364	0.9598	0.8965	0.9481
		SVM	0.9768	0.9538	0.9540	0.9078	0.9539
		Bagging	0.9326	0.9595	0.9540	0.9136	0.9568
		XGBoost	0.9748	0.9538	0.9540	0.9078	0.9539
		KNN	0.9524	0.9422	0.9598	0.9021	0.9510
		Dtree	0.9482	0.9595	0.9368	0.8965	0.9481
		NB	0.9264	0.9538	0.9540	0.9078	0.9539
	HLA-A*02:01	LR	0.8950	0.9254	0.8559	0.7831	0.8906
		SVM	0.9334	0.9211	0.8646	0.7869	0.8928
		Bagging	0.8985	0.9123	0.8384	0.7527	0.8753
		XGBoost	0.9164	0.9079	0.8646	0.7732	0.8862
		KNN	0.8912	0.8684	0.8777	0.7462	0.8731
		Dtree	0.8600	0.8640	0.8559	0.7199	0.8600
		NB	0.8615	0.9211	0.8646	0.7869	0.8928
	HLA-A*03:01	LR	0.9663	0.9540	0.9432	0.8972	0.9486
		SVM	0.9717	0.9540	0.9432	0.8972	0.9486
		Bagging	0.9681	0.9540	0.9432	0.8972	0.9486
		XGBoost	0.9613	0.9540	0.9432	0.8972	0.9486
		KNN	0.9478	0.9540	0.9432	0.8972	0.9486
		Dtree	0.9314	0.9310	0.9318	0.8629	0.9314
		NB	0.9654	0.9540	0.9432	0.8972	0.9486
	HLA-A*11:01	LR	0.9762	0.9516	0.9524	0.9040	0.9520
		SVM	0.9675	0.9032	0.9683	0.8737	0.9360
		Bagging	0.9722	0.9194	0.9683	0.8890	0.9440
		XGBoost	0.9844	0.9355	0.9683	0.9044	0.9520
		KNN	0.9562	0.9355	0.9683	0.9044	0.9520
		Dtree	0.9439	0.9355	0.9524	0.8881	0.9440
		NB	0.9455	0.9194	0.9683	0.8890	0.9440
	HLA-A*24:02	LR	0.9624	0.9355	0.9683	0.9044	0.9520
		SVM	0.9542	0.9194	0.9841	0.9058	0.9520
		Bagging	0.9675	0.9194	0.9683	0.8890	0.9440
		XGBoost	0.9759	0.9194	0.9683	0.8890	0.9440
		KNN	0.9517	0.9194	0.9841	0.9058	0.9520
		Dtree	0.9439	0.9355	0.9524	0.8881	0.9440
		NB	0.9534	0.9516	0.9524	0.9040	0.9520
	HLA-A*29:02	LR	0.9501	0.9394	0.9118	0.8512	0.9254
		SVM	0.9118	0.9394	0.8824	0.8225	0.9104
		Bagging	0.9305	0.9394	0.9118	0.8512	0.9254
		XGBoost	0.9403	0.9394	0.8824	0.8225	0.9104
		KNN	0.9162	0.9394	0.9118	0.8512	0.9254

	Dtree	0.9109	0.9394	0.8824	0.8225	0.9104
	NB	0.9033	0.9394	0.8824	0.8225	0.9104
HLA-A*31:01	LR	0.9631	0.9600	0.8077	0.7749	0.8824
	SVM	0.9415	0.9600	0.8077	0.7749	0.8824
	Bagging	0.9485	0.9200	0.8462	0.7673	0.8824
	XGBoost	0.9692	0.9600	0.8077	0.7749	0.8824
	KNN	0.9354	0.9600	0.8077	0.7749	0.8824
	Dtree	0.8831	0.9200	0.8462	0.7673	0.8824
	NB	0.9015	0.9600	0.8077	0.7749	0.8824
HLA-A*68:01	LR	0.9669	1.0000	0.9412	0.9412	0.9697
	SVM	0.9706	1.0000	0.9412	0.9412	0.9697
	Bagging	0.9669	1.0000	0.9412	0.9412	0.9697
	XGBoost	0.9706	1.0000	0.9412	0.9412	0.9697
	KNN	0.9706	1.0000	0.9412	0.9412	0.9697
	Dtree	0.9706	1.0000	0.9412	0.9412	0.9697
	NB	0.9522	1.0000	0.9412	0.9412	0.9697
HLA-A*68:02	LR	0.9170	0.7895	0.8462	0.6369	0.8182
	SVM	0.8995	0.7895	0.8462	0.6369	0.8182
	Bagging	0.8570	0.8684	0.7179	0.5924	0.7922
	XGBoost	0.8664	0.7368	0.9231	0.6728	0.8312
	KNN	0.8171	0.7895	0.8205	0.6104	0.8052
	Dtree	0.7932	0.8684	0.7179	0.5924	0.7922
	NB	0.9207	0.9211	0.7949	0.7208	0.8571
HLA-B*07:02	LR	0.9774	0.9541	0.9636	0.9178	0.9589
	SVM	0.9756	0.9541	0.9636	0.9178	0.9589
	Bagging	0.9606	0.9450	0.9636	0.9088	0.9543
	XGBoost	0.9729	0.9633	0.9636	0.9269	0.9635
	KNN	0.9611	0.9541	0.9636	0.9178	0.9589
	Dtree	0.8717	0.7706	0.9727	0.7596	0.8721
	NB	0.9560	0.9541	0.9636	0.9178	0.9589
HLA-B*08:01	LR	0.9708	0.8919	0.9737	0.8693	0.9333
	SVM	0.9644	0.8919	0.9737	0.8693	0.9333
	Bagging	0.9459	0.8919	0.9737	0.8693	0.9333
	XGBoost	0.9328	0.8919	0.9737	0.8693	0.9333
	KNN	0.9328	0.8919	0.9737	0.8693	0.9333
	Dtree	0.9328	0.8919	0.9737	0.8693	0.9333
	NB	0.9050	0.8919	0.9737	0.8693	0.9333
HLA-B*15:01	LR	0.9244	0.8831	0.9231	0.8070	0.9032
	SVM	0.9257	0.8831	0.9231	0.8070	0.9032
	Bagging	0.9516	0.8701	0.9359	0.8080	0.9032
	XGBoost	0.9599	0.8701	0.9103	0.7812	0.8903
	KNN	0.9103	0.8831	0.9231	0.8070	0.9032
	Dtree	0.8837	0.8571	0.9103	0.7687	0.8839
	NB	0.8686	0.8571	0.9231	0.7822	0.8903

HLA-B*27:01	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*27:02	LR	0.9819	1.0000	0.9500	0.9508	0.9748
	SVM	0.9794	1.0000	0.9500	0.9508	0.9748
	Bagging	0.9890	0.9831	0.9500	0.9333	0.9664
	XGBoost	0.9864	1.0000	0.9500	0.9508	0.9748
	KNN	0.9750	1.0000	0.9500	0.9508	0.9748
	Dtree	0.9750	1.0000	0.9500	0.9508	0.9748
	NB	0.9917	1.0000	0.9500	0.9508	0.9748
HLA-B*27:03	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*27:05	LR	0.7492	0.8717	0.6235	0.5111	0.7475
	SVM	0.8016	0.8770	0.6088	0.5042	0.7428
	Bagging	0.7181	0.4693	0.8144	0.3023	0.6420
	XGBoost	0.5677	0.8048	0.3178	0.1403	0.5611
	KNN	0.7864	0.6858	0.8024	0.4916	0.7442
	Dtree	0.7702	0.7366	0.8037	0.5416	0.7702
	NB	0.7816	0.8797	0.6021	0.5015	0.7408
HLA-B*27:07	LR	0.9433	0.9583	0.9600	0.9183	0.9592
	SVM	0.9683	0.9583	0.9600	0.9183	0.9592
	Bagging	0.9592	0.9583	0.9600	0.9183	0.9592
	XGBoost	0.9833	0.9583	0.9600	0.9183	0.9592
	KNN	0.9592	0.9583	0.9600	0.9183	0.9592
	Dtree	0.9592	0.9583	0.9600	0.9183	0.9592
	NB	0.9392	0.9583	0.9600	0.9183	0.9592
HLA-B*27:08	LR	0.8816	0.9063	0.9394	0.8464	0.9231
	SVM	0.9328	0.9063	0.9394	0.8464	0.9231
	Bagging	0.9058	0.9063	0.9394	0.8464	0.9231
	XGBoost	0.9228	0.9063	0.9394	0.8464	0.9231
	KNN	0.9228	0.9063	0.9394	0.8464	0.9231
	Dtree	0.9228	0.9063	0.9394	0.8464	0.9231
	NB	0.8703	0.9063	0.9394	0.8464	0.9231
HLA-B*27:09	LR	0.9421	0.8852	0.8871	0.7723	0.8862
	SVM	0.9474	0.9016	0.8710	0.7728	0.8862

	Bagging	0.9044	0.9180	0.8548	0.7741	0.8862
	XGBoost	0.9266	0.9016	0.8710	0.7728	0.8862
	KNN	0.8823	0.9016	0.8710	0.7728	0.8862
	Dtree	0.8864	0.9180	0.8548	0.7741	0.8862
	NB	0.9327	0.9016	0.8710	0.7728	0.8862
HLA-B*35:01	LR	0.9077	0.8611	0.8919	0.7536	0.8767
	SVM	0.9437	0.8333	0.9189	0.7557	0.8767
	Bagging	0.8679	0.8333	0.9189	0.7557	0.8767
	XGBoost	0.8814	0.8889	0.8919	0.7808	0.8904
	KNN	0.8885	0.8611	0.8919	0.7536	0.8767
	Dtree	0.8765	0.8611	0.8919	0.7536	0.8767
	NB	0.8446	0.8611	0.8919	0.7536	0.8767
HLA-B*40:01	LR	0.9990	1.0000	0.9688	0.9688	0.9841
	SVM	0.9990	1.0000	0.9688	0.9688	0.9841
	Bagging	0.9839	1.0000	0.9688	0.9688	0.9841
	XGBoost	0.9829	1.0000	0.9688	0.9688	0.9841
	KNN	0.9844	1.0000	0.9688	0.9688	0.9841
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	0.9929	1.0000	0.9688	0.9688	0.9841
HLA-B*40:02	LR	0.9930	0.9512	0.9762	0.9279	0.9639
	SVM	0.9675	0.9512	0.9762	0.9279	0.9639
	Bagging	0.9730	0.9512	0.9524	0.9036	0.9518
	XGBoost	0.9768	0.9512	0.9762	0.9279	0.9639
	KNN	0.9756	0.9512	0.9762	0.9279	0.9639
	Dtree	0.9637	0.9512	0.9762	0.9279	0.9639
	NB	0.9501	0.9512	0.9762	0.9279	0.9639
HLA-B*44:02	LR	0.9925	0.9385	0.9848	0.9246	0.9618
	SVM	0.9695	0.9538	0.9848	0.9394	0.9695
	Bagging	0.9761	0.9692	0.9848	0.9543	0.9771
	XGBoost	0.9784	0.9692	0.9848	0.9543	0.9771
	KNN	0.9617	0.9385	0.9848	0.9246	0.9618
	Dtree	0.9541	0.9385	0.9697	0.9088	0.9542
	NB	0.9710	0.9385	0.9697	0.9088	0.9542
HLA-B*44:03	LR	0.9561	0.9535	1.0000	0.9550	0.9770
	SVM	0.9757	0.9535	1.0000	0.9550	0.9770
	Bagging	0.9720	0.9535	1.0000	0.9550	0.9770
	XGBoost	0.9656	0.9535	1.0000	0.9550	0.9770
	KNN	0.9762	0.9535	1.0000	0.9550	0.9770
	Dtree	0.9767	0.9535	1.0000	0.9550	0.9770
	NB	0.9979	0.9535	1.0000	0.9550	0.9770
HLA-B*51:01	LR	0.8987	0.8732	0.8056	0.6801	0.8392
	SVM	0.8241	0.8732	0.8056	0.6801	0.8392
	Bagging	0.8732	0.8732	0.8056	0.6801	0.8392
	XGBoost	0.8670	0.8732	0.8194	0.6935	0.8462

	KNN	0.8380	0.8732	0.8056	0.6801	0.8392
	Dtree	0.8394	0.8732	0.8056	0.6801	0.8392
	NB	0.8292	0.8732	0.7917	0.6669	0.8322
HLA-B*57:01	LR	0.9063	0.9343	0.6690	0.6255	0.8014
	SVM	0.9399	0.9066	0.9172	0.8239	0.9119
	Bagging	0.9034	0.9170	0.9103	0.8273	0.9136
	XGBoost	0.9245	0.9135	0.9069	0.8204	0.9102
	KNN	0.8530	0.9135	0.7931	0.7117	0.8532
	Dtree	0.5155	0.9896	0.0414	0.0976	0.5147
	NB	0.9046	0.9446	0.4828	0.4817	0.7133
HLA-B*57:03	LR	0.9707	0.9167	0.9459	0.8633	0.9315
	SVM	0.9489	0.9167	0.9730	0.8917	0.9452
	Bagging	0.9167	0.9167	0.9189	0.8356	0.9178
	XGBoost	0.9227	0.8889	0.9189	0.8084	0.9041
	KNN	0.9448	0.9167	0.9730	0.8917	0.9452
	Dtree	0.9039	0.8889	0.9189	0.8084	0.9041
	NB	0.9722	0.9167	0.9459	0.8633	0.9315
HLA-B*58:01	LR	0.9373	0.9143	0.9167	0.8310	0.9155
	SVM	0.9190	0.9143	0.9444	0.8594	0.9296
	Bagging	0.9028	0.8571	0.8889	0.7466	0.8732
	XGBoost	0.9532	0.8286	1.0000	0.8427	0.9155
	KNN	0.9369	0.9143	0.9444	0.8594	0.9296
	Dtree	0.9433	0.9143	0.9722	0.8886	0.9437
	NB	0.9810	0.9143	0.9444	0.8594	0.9296
HLA-C*01:02	LR	0.9361	0.9512	0.8095	0.7675	0.8795
	SVM	0.9437	0.9512	0.8095	0.7675	0.8795
	Bagging	0.8804	0.9512	0.8095	0.7675	0.8795
	XGBoost	0.9152	0.9512	0.8095	0.7675	0.8795
	KNN	0.8804	0.9512	0.8095	0.7675	0.8795
	Dtree	0.9277	0.9268	0.9286	0.8554	0.9277
	NB	0.9135	0.9512	0.8095	0.7675	0.8795
HLA-C*04:01	LR	0.7600	0.6800	0.7308	0.4114	0.7059
	SVM	0.7554	0.6800	0.7308	0.4114	0.7059
	Bagging	0.7123	0.6800	0.7308	0.4114	0.7059
	XGBoost	0.7169	0.6800	0.7308	0.4114	0.7059
	KNN	0.6808	0.6800	0.7308	0.4114	0.7059
	Dtree	0.7054	0.6800	0.7308	0.4114	0.7059
	NB	0.7600	0.6800	0.7308	0.4114	0.7059
HLA-C*05:01	LR	0.9786	1.0000	0.9048	0.9069	0.9512
	SVM	0.9786	1.0000	0.9048	0.9069	0.9512
	Bagging	0.9726	0.9500	0.9048	0.8548	0.9268
	XGBoost	0.9595	0.9500	0.9524	0.9024	0.9512
	KNN	0.9726	0.9500	0.9524	0.9024	0.9512
	Dtree	0.8083	0.9500	0.6667	0.6399	0.8049

		NB	0.9357	0.9500	0.8095	0.7650	0.8780
	HLA-C*06:02	LR	0.8860	0.9615	0.6667	0.6549	0.8113
		SVM	0.8291	0.8462	0.6667	0.5203	0.7547
		Bagging	0.8120	0.9615	0.6667	0.6549	0.8113
		XGBoost	0.9074	0.9615	0.6667	0.6549	0.8113
		KNN	0.7479	0.8462	0.6667	0.5203	0.7547
		Dtree	0.7215	0.9615	0.4815	0.5023	0.7170
		NB	0.8903	0.9615	0.6667	0.6549	0.8113
	HLA-C*07:01	LR	0.9850	0.9167	0.9730	0.8917	0.9452
		SVM	0.9640	0.9167	0.9730	0.8917	0.9452
		Bagging	0.9786	0.9167	0.9730	0.8917	0.9452
		XGBoost	0.9745	0.9167	0.9730	0.8917	0.9452
		KNN	0.9568	0.9167	0.9730	0.8917	0.9452
		Dtree	0.9583	0.9167	1.0000	0.9208	0.9589
		NB	0.9317	0.9167	0.9730	0.8917	0.9452
13	HLA-A*01:01	LR	0.9847	0.9727	0.9910	0.9640	0.9819
		SVM	0.9988	0.9727	0.9910	0.9640	0.9819
		Bagging	0.9803	0.9727	0.9910	0.9640	0.9819
		XGBoost	0.9958	0.9909	0.9820	0.9729	0.9864
		KNN	0.9817	0.9727	0.9910	0.9640	0.9819
		Dtree	0.9819	0.9727	0.9910	0.9640	0.9819
		NB	0.9944	0.9727	0.9910	0.9640	0.9819
	HLA-A*02:01	LR	0.9521	0.8947	0.9271	0.8224	0.9110
		SVM	0.9174	0.8842	0.9271	0.8122	0.9058
		Bagging	0.9014	0.8947	0.8958	0.7906	0.8953
		XGBoost	0.9259	0.8632	0.9271	0.7921	0.8953
		KNN	0.8928	0.8842	0.8854	0.7696	0.8848
		Dtree	0.9213	0.8947	0.9479	0.8440	0.9215
		NB	0.9567	0.9053	0.9167	0.8220	0.9110
	HLA-A*03:01	LR	0.9854	0.9444	0.9474	0.8918	0.9459
		SVM	0.9737	1.0000	0.8947	0.8974	0.9459
		Bagging	0.9678	1.0000	0.8947	0.8974	0.9459
		XGBoost	0.9883	1.0000	0.8947	0.8974	0.9459
		KNN	0.9415	0.8889	0.8947	0.7836	0.8919
		Dtree	0.9474	1.0000	0.8947	0.8974	0.9459
		NB	0.9825	1.0000	0.8947	0.8974	0.9459
	HLA-A*11:01	LR	0.8596	0.8333	0.8421	0.6754	0.8378
		SVM	0.8363	0.8889	0.8421	0.7310	0.8649
		Bagging	0.8377	0.8333	0.8421	0.6754	0.8378
		XGBoost	0.9108	0.8333	0.8421	0.6754	0.8378
		KNN	0.8655	0.8889	0.8421	0.7310	0.8649
		Dtree	0.8377	0.8333	0.8421	0.6754	0.8378
		NB	0.9020	0.8333	0.8421	0.6754	0.8378
	HLA-A*24:02	LR	0.9699	1.0000	0.6750	0.7115	0.8354

	SVM	0.9865	0.9487	0.9250	0.8737	0.9367
	Bagging	0.9769	0.9744	0.8750	0.8526	0.9241
	XGBoost	0.9202	0.9744	0.8750	0.8526	0.9241
	KNN	0.9497	0.9744	0.9250	0.8999	0.9494
	Dtree	0.9372	0.9744	0.9000	0.8760	0.9367
	NB	0.9872	0.9744	0.8000	0.7850	0.8861
HLA-A*29:02	LR	0.9507	0.9211	0.9231	0.8441	0.9221
	SVM	0.9487	0.9211	0.9231	0.8441	0.9221
	Bagging	0.9386	0.9211	0.9231	0.8441	0.9221
	XGBoost	0.9629	0.9211	0.9231	0.8441	0.9221
	KNN	0.9339	0.9211	0.9231	0.8441	0.9221
	Dtree	0.9221	0.9211	0.9231	0.8441	0.9221
	NB	0.9450	0.9211	0.9231	0.8441	0.9221
HLA-A*31:01	LR	0.8857	0.8571	0.9333	0.7943	0.8966
	SVM	0.8714	0.8571	0.9333	0.7943	0.8966
	Bagging	0.9095	0.8571	0.8667	0.7238	0.8621
	XGBoost	0.9357	0.8571	0.9333	0.7943	0.8966
	KNN	0.9000	0.8571	0.9333	0.7943	0.8966
	Dtree	0.8619	0.8571	0.8667	0.7238	0.8621
	NB	0.8952	0.8571	0.9333	0.7943	0.8966
HLA-A*68:02	LR	0.8913	0.8261	0.6667	0.4982	0.7447
	SVM	0.8080	0.8261	0.6667	0.4982	0.7447
	Bagging	0.7482	0.9130	0.5833	0.5236	0.7447
	XGBoost	0.7482	0.9130	0.5833	0.5236	0.7447
	KNN	0.7491	0.9130	0.5833	0.5236	0.7447
	Dtree	0.7482	0.9130	0.5833	0.5236	0.7447
	NB	0.8895	0.8261	0.6667	0.4982	0.7447
HLA-B*07:02	LR	0.9877	0.9219	0.9846	0.9087	0.9535
	SVM	0.9731	0.9219	0.9846	0.9087	0.9535
	Bagging	0.9510	0.9219	0.9846	0.9087	0.9535
	XGBoost	0.9647	0.9219	0.9846	0.9087	0.9535
	KNN	0.9502	0.9219	0.9846	0.9087	0.9535
	Dtree	0.9532	0.9219	0.9846	0.9087	0.9535
	NB	0.9964	0.8906	0.9846	0.8797	0.9380
HLA-B*15:01	LR	0.8808	0.8627	0.8269	0.6899	0.8447
	SVM	0.8741	0.8627	0.8654	0.7281	0.8641
	Bagging	0.9123	0.8824	0.8654	0.7477	0.8738
	XGBoost	0.9121	0.8431	0.9038	0.7487	0.8738
	KNN	0.8431	0.9216	0.7115	0.6467	0.8155
	Dtree	0.8927	0.8431	0.9423	0.7899	0.8932
	NB	0.8397	0.8627	0.8654	0.7281	0.8641
HLA-B*27:01	LR	0.9444	0.9444	0.9474	0.8918	0.9459
	SVM	0.9415	0.9444	0.9474	0.8918	0.9459
	Bagging	0.9722	0.9444	0.9474	0.8918	0.9459

	XGBoost	0.9459	0.9444	0.9474	0.8918	0.9459
	KNN	0.9459	0.9444	0.9474	0.8918	0.9459
	Dtree	0.9459	0.9444	0.9474	0.8918	0.9459
	NB	0.9342	0.9444	0.9474	0.8918	0.9459
HLA-B*27:02	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	0.9643	0.9643	0.9818
	Bagging	1.0000	1.0000	1.0000	1.0000	1.0000
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	0.8929	0.8964	0.9455
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	1.0000	1.0000	1.0000	1.0000	1.0000
HLA-B*27:05	LR	0.8058	0.6798	0.8659	0.5555	0.7730
	SVM	0.7988	0.5870	0.9093	0.5243	0.7483
	Bagging	0.7882	0.6897	0.8540	0.5513	0.7720
	XGBoost	0.8225	0.7431	0.7416	0.4847	0.7423
	KNN	0.7728	0.6937	0.8560	0.5571	0.7749
	Dtree	0.7630	0.6838	0.8422	0.5328	0.7631
	NB	0.8064	0.6581	0.8777	0.5493	0.7680
HLA-B*27:08	LR	1.0000	1.0000	1.0000	1.0000	1.0000
	SVM	1.0000	1.0000	1.0000	1.0000	1.0000
	Bagging	1.0000	1.0000	0.8750	0.8787	0.9355
	XGBoost	1.0000	1.0000	1.0000	1.0000	1.0000
	KNN	1.0000	1.0000	1.0000	1.0000	1.0000
	Dtree	1.0000	1.0000	1.0000	1.0000	1.0000
	NB	0.9063	1.0000	0.5625	0.6193	0.7742
HLA-B*27:09	LR	0.8761	0.9444	0.7568	0.7125	0.8493
	SVM	0.9182	0.8333	0.7838	0.6176	0.8082
	Bagging	0.8480	0.9167	0.7568	0.6811	0.8356
	XGBoost	0.9032	0.9167	0.7568	0.6811	0.8356
	KNN	0.8532	0.9167	0.7568	0.6811	0.8356
	Dtree	0.7830	0.9444	0.6216	0.5964	0.7808
	NB	0.8739	0.7222	0.8649	0.5938	0.7945
HLA-B*35:01	LR	0.8791	1.0000	0.7222	0.7470	0.8571
	SVM	0.9346	0.9412	0.7778	0.7261	0.8571
	Bagging	0.8170	0.8235	0.7778	0.6013	0.8000
	XGBoost	0.8301	0.8824	0.7778	0.6623	0.8286
	KNN	0.7745	0.8235	0.7222	0.5475	0.7714
	Dtree	0.7974	0.7059	0.8889	0.6068	0.8000
	NB	0.8791	0.8824	0.8333	0.7157	0.8571
HLA-B*44:02	LR	0.9524	0.9048	1.0000	0.9107	0.9535
	SVM	0.9957	0.9048	1.0000	0.9107	0.9535
	Bagging	0.9416	0.9048	0.7727	0.6819	0.8372
	XGBoost	0.9524	0.9048	1.0000	0.9107	0.9535
	KNN	0.9524	0.9048	1.0000	0.9107	0.9535

	Dtree	0.8387	0.9048	0.7727	0.6819	0.8372
	NB	0.9459	0.9048	1.0000	0.9107	0.9535
HLA-B*51:01	LR	0.9810	0.9000	0.9524	0.8544	0.9268
	SVM	0.9643	0.9000	0.9524	0.8544	0.9268
	Bagging	0.9250	0.9000	0.9524	0.8544	0.9268
	XGBoost	0.9214	0.9000	0.9524	0.8544	0.9268
	KNN	0.9238	0.9000	0.9524	0.8544	0.9268
	Dtree	0.9262	0.9000	0.9524	0.8544	0.9268
	NB	0.9333	0.9000	0.9524	0.8544	0.9268
HLA-B*57:01	LR	0.8900	0.8704	0.9141	0.7853	0.8923
	SVM	0.8669	0.8580	0.9325	0.7929	0.8954
	Bagging	0.9043	0.8395	0.9202	0.7624	0.8800
	XGBoost	0.8933	0.8086	0.9325	0.7471	0.8708
	KNN	0.8995	0.8580	0.9325	0.7929	0.8954
	Dtree	0.8612	0.7654	0.9571	0.7365	0.8615
	NB	0.9094	0.8580	0.9264	0.7864	0.8923
HLA-B*57:03	LR	0.9286	0.9500	0.7619	0.7223	0.8537
	SVM	0.8024	0.9500	0.7619	0.7223	0.8537
	Bagging	0.8643	0.9500	0.7619	0.7223	0.8537
	XGBoost	0.8762	0.9000	0.7619	0.6667	0.8293
	KNN	0.8321	0.9500	0.7619	0.7223	0.8537
	Dtree	0.8310	0.9000	0.7619	0.6667	0.8293
	NB	0.9643	0.9500	0.7619	0.7223	0.8537
HLA-B*58:01	LR	0.6550	0.5556	1.0000	0.6253	0.7838
	SVM	0.9123	0.8333	0.8947	0.7302	0.8649
	Bagging	0.9064	0.5556	1.0000	0.6253	0.7838
	XGBoost	0.8787	0.7778	0.8421	0.6217	0.8108
	KNN	0.8553	0.8333	0.8947	0.7302	0.8649
	Dtree	0.8392	0.8889	0.7895	0.6804	0.8378
	NB	0.7076	0.9444	0.4737	0.4706	0.7027
HLA-C*04:01	LR	0.6660	0.5909	0.8696	0.4809	0.7333
	SVM	0.8123	0.5909	0.8696	0.4809	0.7333
	Bagging	0.7381	0.6364	0.6522	0.2885	0.6444
	XGBoost	0.6798	0.5909	0.8261	0.4299	0.7111
	KNN	0.7105	0.5909	0.8696	0.4809	0.7333
	Dtree	0.7085	0.5909	0.8261	0.4299	0.7111
	NB	0.7648	0.5909	0.8696	0.4809	0.7333
HLA-C*05:01	LR	0.9083	0.8667	0.8750	0.7417	0.8710
	SVM	0.9583	0.8667	0.8750	0.7417	0.8710
	Bagging	0.9042	0.7333	0.8750	0.6161	0.8065
	XGBoost	0.8354	0.7333	0.9375	0.6883	0.8387
	KNN	0.8938	0.8667	0.8750	0.7417	0.8710
	Dtree	0.8354	0.7333	0.9375	0.6883	0.8387
	NB	0.8833	0.8667	0.8750	0.7417	0.8710

	HLA-C*06:02	LR	0.8129	0.1333	1.0000	0.2693	0.5738
		SVM	0.8118	0.3667	0.9677	0.4206	0.6721
		Bagging	0.7151	0.3000	0.9677	0.3616	0.6393
		XGBoost	0.6656	0.3667	0.9032	0.3209	0.6393
		KNN	0.5355	0.1000	1.0000	0.2312	0.5574
		Dtree	0.6683	0.4333	0.9032	0.3825	0.6721
		NB	0.6978	0.5667	0.6452	0.2125	0.6066
14	HLA-A*01:01	LR	0.9951	0.9804	0.9808	0.9612	0.9806
		SVM	0.9834	0.9804	0.9808	0.9612	0.9806
		Bagging	0.9798	0.9804	0.9423	0.9230	0.9612
		XGBoost	0.9902	0.9804	0.9808	0.9612	0.9806
		KNN	0.9885	0.9804	0.9808	0.9612	0.9806
		Dtree	0.9613	0.9804	0.9423	0.9230	0.9612
		NB	0.9789	0.9804	0.9808	0.9612	0.9806
	HLA-A*02:01	LR	0.8582	0.8431	0.8846	0.7286	0.8641
		SVM	0.8560	0.8431	0.8846	0.7286	0.8641
		Bagging	0.8818	0.8235	0.9038	0.7301	0.8641
		XGBoost	0.8778	0.8431	0.9038	0.7487	0.8738
		KNN	0.8518	0.8431	0.8846	0.7286	0.8641
		Dtree	0.8641	0.8627	0.8654	0.7281	0.8641
		NB	0.8548	0.8431	0.8846	0.7286	0.8641
	HLA-A*24:02	LR	0.7647	0.7500	1.0000	0.7792	0.8788
		SVM	0.9596	0.7500	1.0000	0.7792	0.8788
		Bagging	0.8235	0.8125	0.7647	0.5772	0.7879
		XGBoost	0.9963	0.7500	1.0000	0.7792	0.8788
		KNN	0.8750	0.7500	1.0000	0.7792	0.8788
		Dtree	0.7886	0.8125	0.7647	0.5772	0.7879
		NB	0.7647	0.7500	1.0000	0.7792	0.8788
	HLA-A*68:02	LR	0.8801	0.8333	0.8421	0.6754	0.8378
		SVM	0.8509	0.9444	0.4211	0.4258	0.6757
		Bagging	0.8202	0.5000	0.8421	0.3653	0.6757
		XGBoost	0.6988	0.6111	0.8421	0.4671	0.7297
		KNN	0.8363	0.8889	0.7895	0.6804	0.8378
		Dtree	0.8655	0.8889	0.8421	0.7310	0.8649
		NB	0.8246	0.8889	0.8421	0.7310	0.8649
	HLA-B*07:02	LR	0.9008	0.9143	0.2222	0.1886	0.5634
		SVM	0.9087	0.9143	0.2778	0.2483	0.5915
		Bagging	0.8722	0.7714	1.0000	0.7945	0.8873
		XGBoost	0.9603	0.7714	1.0000	0.7945	0.8873
		KNN	0.9226	0.8857	0.9722	0.8621	0.9296
		Dtree	0.9012	0.8857	0.9167	0.8030	0.9014
		NB	0.9857	0.9429	1.0000	0.9451	0.9718
	HLA-B*15:01	LR	0.8532	0.8750	0.8788	0.7538	0.8769
		SVM	0.8911	0.8750	0.8788	0.7538	0.8769

	Bagging	0.8849	0.9063	0.7879	0.6981	0.8462
	XGBoost	0.9257	0.9063	0.8788	0.7850	0.8923
	KNN	0.8911	0.8750	0.8788	0.7538	0.8769
	Dtree	0.8769	0.8750	0.8788	0.7538	0.8769
	NB	0.8684	0.8750	0.8788	0.7538	0.8769
HLA-B*27:05	LR	0.8296	0.7421	0.7559	0.4981	0.7490
	SVM	0.7465	0.7237	0.7664	0.4905	0.7451
	Bagging	0.8094	0.7395	0.7270	0.4665	0.7332
	XGBoost	0.7558	0.7132	0.7795	0.4938	0.7464
	KNN	0.7428	0.7263	0.7638	0.4905	0.7451
	Dtree	0.7267	0.7263	0.7270	0.4533	0.7267
	NB	0.7255	0.7263	0.7638	0.4905	0.7451
HLA-B*27:09	LR	0.7338	0.7600	0.8077	0.5686	0.7843
	SVM	0.7523	0.7600	0.8077	0.5686	0.7843
	Bagging	0.7892	0.7600	0.8462	0.6090	0.8039
	XGBoost	0.7715	0.7600	0.7308	0.4908	0.7451
	KNN	0.7700	0.7600	0.8077	0.5686	0.7843
	Dtree	0.7646	0.7600	0.7692	0.5292	0.7647
	NB	0.8092	0.7200	0.8462	0.5715	0.7843
HLA-B*35:01	LR	0.9375	0.9333	1.0000	0.9372	0.9677
	SVM	1.0000	0.9333	1.0000	0.9372	0.9677
	Bagging	1.0000	0.8000	1.0000	0.8208	0.9032
	XGBoost	0.9771	0.9333	1.0000	0.9372	0.9677
	KNN	0.9646	0.9333	1.0000	0.9372	0.9677
	Dtree	0.9354	0.9333	0.9375	0.8708	0.9355
	NB	0.9375	0.9333	1.0000	0.9372	0.9677
HLA-B*57:01	LR	0.7806	0.7978	0.7889	0.5866	0.7933
	SVM	0.8228	0.7978	0.7889	0.5866	0.7933
	Bagging	0.7747	0.7191	0.8000	0.5209	0.7598
	XGBoost	0.8625	0.7640	0.8000	0.5645	0.7821
	KNN	0.8340	0.6966	0.8889	0.5970	0.7933
	Dtree	0.7428	0.7079	0.7778	0.4869	0.7430
	NB	0.7464	0.6854	0.8333	0.5247	0.7598
HLA-C*04:01	LR	0.8368	0.7895	0.8000	0.5895	0.7949
	SVM	0.7842	0.7895	0.8000	0.5895	0.7949
	Bagging	0.8421	0.7895	0.7500	0.5395	0.7692
	XGBoost	0.8461	0.7368	0.8500	0.5915	0.7949
	KNN	0.7382	1.0000	0.4500	0.5339	0.7179
	Dtree	0.7487	0.9474	0.5500	0.5386	0.7436
	NB	0.7684	0.7895	0.8000	0.5895	0.7949
HLA-C*05:01	LR	0.8272	1.0000	0.2353	0.3603	0.6061
	SVM	0.6544	0.5000	0.5882	0.0886	0.5455
	Bagging	0.6085	0.5000	0.6471	0.1487	0.5758
	XGBoost	0.6654	0.5000	0.6471	0.1487	0.5758

	KNN	0.5938	0.5000	0.6471	0.1487	0.5758
	Dtree	0.6029	0.5000	0.7059	0.2106	0.6061
	NB	0.8125	0.9375	0.2941	0.3001	0.6061
HLA-C*06:02	LR	0.7943	0.7222	0.7568	0.4793	0.7397
	SVM	0.7935	0.6667	0.7568	0.4253	0.7123
	Bagging	0.7121	0.5278	0.8378	0.3852	0.6849
	XGBoost	0.7406	0.5278	0.8378	0.3852	0.6849
	KNN	0.7245	0.6667	0.7568	0.4253	0.7123
	Dtree	0.6288	0.5278	0.7297	0.2631	0.6301
	NB	0.7035	0.6111	0.7838	0.4013	0.6986

Supplementary Table S4

Performance comparison of HLAB, Anthem, MixMHCpred 2.0.1, NetMHCpan 4.1, NetMHCcons 1.1, NetMHCstabpan 1.0, MHCNetSeq, ACME, and DeepSeqPan on the independent test dataset.

Length	**HLA-I**	**Tool**	**AUC**	**Sn**	**Sp**	**ACC**	**MCC**
8	HLA-A*01:01	HLAB	0.9945	0.9552	0.9559	0.9556	0.9111
		Anthem	0.9720	0.8450	0.9480	0.8960	0.7970
		NetMHCpan-4.1	0.9650	0.9130	0.9250	0.9190	0.8400
		MHCNetSeq	0.9590	0.9250	0.9280	0.9270	0.8550
		NetMHCcons-1.1	0.9390	0.8670	0.8870	0.8770	0.7550
		NetMHCstabpan-1.0	0.9340	0.8580	0.8880	0.8730	0.7470
		MixMHCpred-2.0.2	0.9280	0.8600	0.8840	0.8720	0.7440
		ACME	0.9170	0.8570	0.8810	0.8690	0.7380

HLA-A*02:01	HLAB	0.9188	0.8862	0.8797	0.8730	0.7460
	Anthem	0.9110	0.8060	0.9020	0.8540	0.7120
	ACME	0.9110	0.8500	0.8500	0.8500	0.7000
	NetMHCcons-1.1	0.9070	0.8230	0.8780	0.8500	0.7020
	NetMHCstabpan-1.0	0.9030	0.8260	0.8680	0.8470	0.6950
	MixMHCpred-2.0.2	0.9010	0.8420	0.8450	0.8440	0.6880
	NetMHCpan-4.1	0.9010	0.8230	0.8770	0.8500	0.7010
	MHCNetSeq	0.8870	0.7980	0.8710	0.8350	0.6720
HLA-A*03:01	HLAB	0.9825	0.9474	0.9483	0.9478	0.8956
	NetMHCpan-4.1	0.9760	0.9650	0.9630	0.9640	0.9280
	NetMHCcons-1.1	0.9750	0.9630	0.9740	0.9680	0.9370
	NetMHCstabpan-1.0	0.9750	0.9650	0.9670	0.9660	0.9320
	MixMHCpred-2.0.2	0.9720	0.9650	0.9070	0.9360	0.8740
	Anthem	0.9680	0.9470	0.9300	0.9390	0.8780
	ACME	0.9630	0.9420	0.9590	0.9510	0.9020
	MHCNetSeq	0.9470	0.9310	0.8950	0.9130	0.8270
HLA-A*11:01	MHCNetSeq	0.9790	0.9350	0.9710	0.9530	0.9100
	NetMHCstabpan-1.0	0.9740	0.9590	0.9180	0.9380	0.8840
	NetMHCcons-1.1	0.9720	0.9410	0.9180	0.9290	0.8650
	NetMHCpan-4.1	0.9680	0.9000	0.9350	0.9180	0.8370
	HLAB	0.9575	0.8824	0.8333	0.8571	0.7157
	ACME	0.9560	0.8940	0.9290	0.9120	0.8260
	Anthem	0.9340	0.7880	0.9180	0.8530	0.7150
	MixMHCpred-2.0.2	0.9150	0.8880	0.8820	0.8850	0.7730
HLA-A*24:02	NetMHCpan-4.1	0.9720	0.9590	0.9180	0.9390	0.8790
	NetMHCcons-1.1	0.9690	0.9390	0.9230	0.9310	0.8620
	NetMHCstabpan-1.0	0.9690	0.9480	0.9050	0.9260	0.8530
	HLAB	0.9611	0.8409	0.9333	0.8876	0.7782
	MixMHCpred-2.0.2	0.9610	0.9140	0.9270	0.9200	0.8410
	Anthem	0.9590	0.8500	0.9290	0.8890	0.7850
	ACME	0.9590	0.9020	0.9140	0.9080	0.8180
	MHCNetSeq	0.9400	0.8860	0.8980	0.8920	0.7850
HLA-A*29:02	HLAB	0.9847	0.9669	0.9396	0.9532	0.9067
	NetMHCpan-4.1	0.9820	0.9900	0.9450	0.9680	0.9360
	NetMHCcons-1.1	0.9820	0.9720	0.9420	0.9580	0.9160
	NetMHCstabpan-1.0	0.9790	0.9670	0.9400	0.9540	0.9090
	ACME	0.9730	0.9300	0.9350	0.9320	0.8650
	MixMHCpred-2.0.2	0.9690	0.9100	0.9630	0.9360	0.8740
	Anthem	0.9600	0.9200	0.8950	0.9070	0.8180
	MHCNetSeq	0.9410	0.8750	0.8780	0.8760	0.7540
HLA-B*07:02	NetMHCpan-4.1	0.9860	0.9440	0.9590	0.9520	0.9030
	HLAB	0.9847	0.9669	0.9396	0.9532	0.9067
	NetMHCcons-1.1	0.9810	0.9420	0.9410	0.9410	0.8830
	NetMHCstabpan-1.0	0.9810	0.9360	0.9490	0.9430	0.8850

	MixMHCpred-2.0.2	0.9800	0.9240	0.9440	0.9340	0.8690
	ACME	0.9800	0.9420	0.9450	0.9440	0.8870
	MHCNetSeq	0.9800	0.9180	0.9630	0.9410	0.8830
	Anthem	0.9750	0.9440	0.9550	0.9490	0.8980
HLA-B*08:01	NetMHCpan-4.1	0.9940	0.9820	0.9770	0.9800	0.9590
	HLAB	0.9912	0.9913	0.9655	0.9784	0.9571
	Anthem	0.9900	0.9510	0.9590	0.9550	0.9100
	NetMHCcons-1.1	0.9900	0.9740	0.9650	0.9700	0.9390
	NetMHCstabpan-1.0	0.9890	0.9760	0.9610	0.9680	0.9360
	MixMHCpred-2.0.2	0.9870	0.9370	0.9540	0.9450	0.8910
	ACME	0.9840	0.9770	0.9580	0.9670	0.9350
	MHCNetSeq	0.9790	0.9540	0.9330	0.9430	0.8870
HLA-B*13:02	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCpan-4.1	0.9960	0.9860	0.9930	0.9890	0.9790
	NetMHCstabpan-1.0	0.9950	1.0000	0.9930	0.9960	0.9930
	NetMHCcons-1.1	0.9940	1.0000	0.9930	0.9960	0.9930
	MixMHCpred-2.0.2	0.9860	0.9220	0.9930	0.9570	0.9180
	ACME	0.9780	0.9930	0.9570	0.9750	0.9510
	MHCNetSeq	0.9710	0.9640	0.9070	0.9360	0.8760
	Anthem	0.9560	0.8570	0.9990	0.9280	0.8640
HLA-B*14:02	NetMHCpan-4.1	0.9960	0.9930	0.9830	0.9880	0.9760
	Anthem	0.9950	0.9240	0.9750	0.9500	0.9010
	HLAB	0.9935	0.9811	0.9813	0.9812	0.9624
	NetMHCstabpan-1.0	0.9930	0.9790	0.9750	0.9770	0.9550
	NetMHCcons-1.1	0.9910	0.9780	0.9700	0.9740	0.9480
	MixMHCpred-2.0.2	0.9890	0.9320	0.9660	0.9490	0.8990
	ACME	0.9840	0.9490	0.9490	0.9490	0.8980
	MHCNetSeq	0.9570	0.9620	0.8620	0.9120	0.8290
HLA-B*15:01	NetMHCpan-4.1	0.9850	0.9420	0.9590	0.9500	0.9010
	MHCNetSeq	0.9850	0.9440	0.9420	0.9430	0.8860
	Anthem	0.9810	0.9200	0.9540	0.9370	0.8740
	MixMHCpred-2.0.2	0.9810	0.9500	0.9330	0.9410	0.8830
	NetMHCstabpan-1.0	0.9750	0.9230	0.9440	0.9340	0.8680
	HLAB	0.9745	0.9375	0.8850	0.9111	0.8234
	NetMHCcons-1.1	0.9730	0.9120	0.9450	0.9280	0.8570
	ACME	0.9730	0.9210	0.9610	0.9410	0.8830
HLA-B*18:01	Anthem	0.9910	0.9600	0.9870	0.9730	0.9480
	ACME	0.9910	0.9830	0.9910	0.9870	0.9740
	NetMHCcons-1.1	0.9890	0.9810	0.9880	0.9840	0.9690
	MixMHCpred-2.0.2	0.9870	0.9710	0.9830	0.9770	0.9540
	NetMHCpan-4.1	0.9870	0.9770	0.9910	0.9840	0.9690
	NetMHCstabpan-1.0	0.9870	0.9760	0.9800	0.9780	0.9560
	HLAB	0.9849	0.9810	0.9717	0.9763	0.9527
	MHCNetSeq	0.9840	0.9720	0.9500	0.9610	0.9230

HLA-B*18:03	HLAB	1.0000	1.0000	0.9545	0.9767	0.9545
	MixMHCpred-2.0.2	0.9990	1.0000	0.9810	0.9900	0.9810
	NetMHCstabpan-1.0	0.9980	1.0000	0.9950	0.9980	0.9950
	NetMHCpan-4.1	0.9970	1.0000	0.9950	0.9980	0.9950
	NetMHCcons-1.1	0.9970	1.0000	0.9950	0.9980	0.9950
	ACME	0.9960	0.9900	0.9860	0.9880	0.9760
	MHCNetSeq	0.9940	1.0000	0.9280	0.9640	0.9320
	Anthem	0.9780	0.9330	0.9840	0.9580	0.9190
HLA-B*27:05	Anthem	0.8320	0.6970	0.7780	0.7380	0.4780
	HLAB	0.8317	0.8013	0.7580	0.7796	0.5597
	MHCNetSeq	0.7270	0.6080	0.7370	0.6730	0.3480
	NetMHCstabpan-1.0	0.7230	0.5880	0.7680	0.6780	0.3630
	NetMHCcons-1.1	0.7170	0.5880	0.7400	0.6640	0.3340
	MixMHCpred-2.0.2	0.7160	0.5780	0.7530	0.6650	0.3390
	NetMHCpan-4.1	0.7130	0.6230	0.7330	0.6780	0.3580
	ACME	0.7040	0.5730	0.7830	0.6780	0.3670
HLA-B*27:09	HLAB	0.9857	0.9500	0.9048	0.9268	0.8548
	Anthem	0.9070	0.7500	0.8810	0.8160	0.6470
	NetMHCpan-4.1	0.8370	0.8600	0.7650	0.8120	0.6320
	MixMHCpred-2.0.2	0.7900	0.7000	0.7900	0.7450	0.4950
	NetMHCcons-1.1	0.6780	0.7650	0.6300	0.6980	0.4050
	NetMHCstabpan-1.0	0.6760	0.7700	0.6200	0.6950	0.3990
	MHCNetSeq	0.5590	0.5500	0.6000	0.5750	0.1560
	ACME	0.5580	0.6850	0.5100	0.5980	0.2010
HLA-B*35:01	HLAB	0.9512	0.8261	0.8936	0.8602	0.7217
	Anthem	0.9270	0.8220	0.9110	0.8670	0.7370
	MHCNetSeq	0.9120	0.9130	0.8390	0.8760	0.7550
	NetMHCpan-4.1	0.9110	0.8190	0.9070	0.8630	0.7290
	MixMHCpred-2.0.2	0.8970	0.8020	0.8850	0.8440	0.6930
	NetMHCstabpan-1.0	0.8950	0.8080	0.9020	0.8560	0.7140
	NetMHCcons-1.1	0.8940	0.8110	0.8850	0.8480	0.6980
	ACME	0.8910	0.7920	0.9000	0.8460	0.6970
HLA-B*37:01	NetMHCpan-4.1	0.9960	0.9960	0.9890	0.9930	0.9850
	NetMHCstabpan-1.0	0.9960	0.9880	0.9720	0.9800	0.9610
	NetMHCcons-1.1	0.9930	0.9750	0.9650	0.9700	0.9400
	HLAB	0.9923	0.9918	0.9837	0.9878	0.9755
	Anthem	0.9920	0.9280	0.9850	0.9570	0.9150
	ACME	0.9900	0.9590	0.9560	0.9570	0.9150
	MixMHCpred-2.0.2	0.9420	0.8750	0.8590	0.8670	0.7350
	MHCNetSeq	0.8730	0.7900	0.8130	0.8020	0.6040
HLA-B*39:01	NetMHCcons-1.1	0.9920	0.9810	0.9740	0.9780	0.9560
	ACME	0.9920	1.0000	0.9670	0.9830	0.9680
	NetMHCpan-4.1	0.9900	0.9700	0.9590	0.9640	0.9310
	NetMHCstabpan-1.0	0.9880	0.9630	0.9590	0.9610	0.9230

	MHCNetSeq	0.9820	0.9410	0.9370	0.9390	0.8790
	HLAB	0.9683	0.8148	0.9643	0.8909	0.7896
	MixMHCpred-2.0.2	0.9560	0.8740	0.9110	0.8920	0.7870
	Anthem	0.9450	0.7780	0.9760	0.8770	0.7690
HLA-B*39:24	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9980	1.0000	0.9880	0.9940	0.9880
	NetMHCpan-4.1	0.9920	0.9760	0.9680	0.9720	0.9440
	Anthem	0.9910	0.9840	0.9620	0.9730	0.9480
	NetMHCcons-1.1	0.9900	1.0000	0.9720	0.9860	0.9730
	NetMHCstabpan-1.0	0.9900	1.0000	0.9680	0.9840	0.9690
	ACME	0.9850	0.9920	0.9560	0.9740	0.9500
	MHCNetSeq	0.9730	0.9320	0.9240	0.9280	0.8560
HLA-B*40:01	NetMHCpan-4.1	0.9950	0.9950	0.9760	0.9860	0.9720
	Anthem	0.9930	0.9900	0.9700	0.9800	0.9620
	NetMHCcons-1.1	0.9910	0.9860	0.9620	0.9740	0.9480
	NetMHCstabpan-1.0	0.9910	0.9950	0.9620	0.9790	0.9590
	ACME	0.9910	0.9810	0.9570	0.9690	0.9390
	HLAB	0.9848	1.0000	0.9545	0.9767	0.9545
	MixMHCpred-2.0.2	0.9820	0.9570	0.9470	0.9520	0.9070
	MHCNetSeq	0.9650	0.9190	0.9280	0.9240	0.8500
HLA-B*40:02	Anthem	0.9890	0.9570	0.9670	0.9620	0.9230
	MixMHCpred-2.0.2	0.9890	0.9570	0.9690	0.9630	0.9260
	NetMHCpan-4.1	0.9850	0.9650	0.9520	0.9580	0.9170
	HLAB	0.9829	0.9766	0.8867	0.9316	0.8667
	NetMHCcons-1.1	0.9800	0.9530	0.9420	0.9470	0.8950
	NetMHCstabpan-1.0	0.9780	0.9490	0.9280	0.9380	0.8780
	ACME	0.9760	0.9480	0.9240	0.9360	0.8730
	MHCNetSeq	0.9710	0.9800	0.7880	0.8840	0.7820
HLA-B*44:02	HLAB	0.9954	0.9310	1.0000	0.9661	0.9343
	MixMHCpred-2.0.2	0.9910	0.9690	0.9690	0.9690	0.9380
	NetMHCpan-4.1	0.9890	0.9760	0.9550	0.9660	0.9310
	NetMHCcons-1.1	0.9870	0.9630	0.9660	0.9640	0.9280
	NetMHCstabpan-1.0	0.9860	0.9380	0.9620	0.9500	0.9010
	ACME	0.9780	0.9350	0.9310	0.9330	0.8660
	Anthem	0.9700	0.8480	0.9470	0.8980	0.8000
	MHCNetSeq	0.9520	0.9380	0.9070	0.9230	0.8470
HLA-B*44:03	MHCNetSeq	0.9890	0.9470	0.9710	0.9590	0.9180
	NetMHCpan-4.1	0.9860	0.9570	0.9710	0.9640	0.9290
	NetMHCcons-1.1	0.9830	0.9610	0.9710	0.9660	0.9330
	HLAB	0.9729	0.9643	0.8621	0.9123	0.8294
	ACME	0.9780	0.9570	0.9710	0.9640	0.9290
	Anthem	0.9760	0.9640	0.9410	0.9530	0.9070
	NetMHCstabpan-1.0	0.9730	0.9610	0.9790	0.9690	0.9400
	MixMHCpred-2.0.2	0.9650	0.9570	0.9710	0.9640	0.9290

HLA-B*46:01	MixMHCpred-2.0.2	0.9750	0.9000	0.9450	0.9230	0.8470
	NetMHCpan-4.1	0.9700	0.9600	0.9150	0.9380	0.8760
	HLAB	0.9667	1.0000	0.9048	0.9512	0.9069
	MHCNetSeq	0.9560	0.8900	0.9250	0.9080	0.8170
	NetMHCstabpan-1.0	0.9520	0.9450	0.8950	0.9200	0.8430
	NetMHCcons-1.1	0.9440	0.9350	0.8750	0.9050	0.8150
	ACME	0.9230	0.8700	0.8550	0.8630	0.7280
	Anthem	0.9200	0.8200	0.8840	0.8520	0.7120
HLA-B*49:01	NetMHCpan-4.1	0.9970	0.9920	0.9850	0.9880	0.9780
	Anthem	0.9930	0.9770	0.9760	0.9760	0.9520
	NetMHCcons-1.1	0.9930	0.9750	0.9860	0.9810	0.9610
	NetMHCstabpan-1.0	0.9930	0.9800	0.9780	0.9790	0.9590
	HLAB	0.9918	0.9766	0.9922	0.9844	0.9690
	ACME	0.9890	0.9780	0.9660	0.9720	0.9440
	MixMHCpred-2.0.2	0.9880	0.9650	0.9720	0.9690	0.9370
	MHCNetSeq	0.9700	0.9770	0.8480	0.9120	0.8320
HLA-B*51:01	NetMHCpan-4.1	0.9880	0.9660	0.9670	0.9670	0.9330
	Anthem	0.9800	0.9360	0.9520	0.9440	0.8880
	NetMHCcons-1.1	0.9740	0.9390	0.9500	0.9440	0.8890
	HLAB	0.9732	0.9638	0.9414	0.9526	0.9054
	MixMHCpred-2.0.2	0.9720	0.9390	0.9500	0.9440	0.8890
	NetMHCstabpan-1.0	0.9720	0.9370	0.9420	0.9390	0.8790
	ACME	0.9480	0.8730	0.9340	0.9040	0.8100
	MHCNetSeq	0.9430	0.8730	0.9020	0.8880	0.7760
HLA-B*51:08	MixMHCpred-2.0.2	0.9980	0.9940	0.9820	0.9880	0.9770
	NetMHCpan-4.1	0.9970	1.0000	0.9820	0.9910	0.9830
	Anthem	0.9870	0.9760	0.9850	0.9810	0.9620
	NetMHCcons-1.1	0.9840	0.9710	0.9590	0.9650	0.9300
	NetMHCstabpan-1.0	0.9840	0.9880	0.9590	0.9740	0.9480
	MHCNetSeq	0.9760	1.0000	0.3530	0.6770	0.4610
	HLAB	0.9739	1.0000	0.9444	0.9714	0.9444
	ACME	0.9690	0.9350	0.9590	0.9470	0.8950
HLA-B*52:01	Anthem	0.9820	0.9420	0.9850	0.9640	0.9280
	HLAB	0.9727	0.9737	0.9740	0.9739	0.9477
	NetMHCpan-4.1	0.9720	0.9650	0.9550	0.9600	0.9200
	MixMHCpred-2.0.2	0.9710	0.9270	0.9570	0.9420	0.8850
	NetMHCstabpan-1.0	0.9650	0.9220	0.9460	0.9340	0.8690
	NetMHCcons-1.1	0.9570	0.9290	0.9310	0.9300	0.8610
	ACME	0.9150	0.8420	0.8740	0.8580	0.7170
	MHCNetSeq	0.8830	0.8560	0.7810	0.8190	0.6410
HLA-B*54:01	HLAB	0.9823	0.8000	1.0000	0.9020	0.8191
	ACME	0.9080	0.8560	0.9440	0.9000	0.8040
	Anthem	0.9040	0.7920	0.9620	0.8770	0.7670
	NetMHCpan-4.1	0.8960	0.8400	0.9720	0.9060	0.8200

	MixMHCpred-2.0.2	0.8920	0.8400	0.9600	0.9000	0.8060
	NetMHCcons-1.1	0.8700	0.8400	0.9800	0.9100	0.8290
	NetMHCstabpan-1.0	0.8600	0.8400	0.9840	0.9120	0.8330
	MHCNetSeq	0.7880	0.7440	0.7320	0.7380	0.4770
HLA-B*57:01	HLAB	0.9571	0.8642	0.9390	0.9018	0.8058
	Anthem	0.9230	0.8100	0.9330	0.8710	0.7490
	MHCNetSeq	0.9090	0.8120	0.8750	0.8440	0.6920
	NetMHCpan-4.1	0.8930	0.8050	0.8740	0.8400	0.6820
	ACME	0.8840	0.7700	0.9220	0.8470	0.7010
	NetMHCcons-1.1	0.8750	0.7800	0.8150	0.7980	0.5970
	NetMHCstabpan-1.0	0.8700	0.7660	0.8400	0.8020	0.6080
	MixMHCpred-2.0.2	0.8630	0.7790	0.9070	0.8430	0.6930
HLA-B*57:03	HLAB	0.9595	0.9649	0.9138	0.9391	0.8795
	Anthem	0.9580	0.8950	0.9240	0.9090	0.8200
	NetMHCpan-4.1	0.9270	0.8720	0.8680	0.8700	0.7410
	ACME	0.9050	0.8000	0.8900	0.8450	0.6920
	NetMHCstabpan-1.0	0.8710	0.8100	0.7890	0.8000	0.6020
	NetMHCcons-1.1	0.8670	0.8300	0.7700	0.8000	0.6020
	MHCNetSeq	0.8580	0.7770	0.8070	0.7920	0.5850
HLA-B*58:01	HLAB	0.9938	0.9481	1.0000	0.9742	0.9496
	Anthem	0.9880	0.9450	0.9360	0.9410	0.8820
	ACME	0.9730	0.9430	0.9490	0.9460	0.8920
	NetMHCpan-4.1	0.9710	0.9140	0.9290	0.9210	0.8440
	MHCNetSeq	0.9690	0.8910	0.9490	0.9200	0.8420
	MixMHCpred-2.0.2	0.9640	0.8930	0.9090	0.9020	0.8040
	NetMHCcons-1.1	0.9600	0.9040	0.9230	0.9140	0.8270
	NetMHCstabpan-1.0	0.9590	0.9030	0.9250	0.9140	0.8280
HLA-C*01:02	NetMHCpan-4.1	0.9690	0.9370	0.9350	0.9360	0.8730
	HLAB	0.9640	0.9630	0.9091	0.9358	0.8729
	NetMHCcons-1.1	0.9630	0.9030	0.9460	0.9250	0.8510
	Anthem	0.9560	0.8550	0.9240	0.8900	0.7830
	NetMHCstabpan-1.0	0.9540	0.9170	0.9020	0.9090	0.8190
	MixMHCpred-2.0.2	0.9410	0.9000	0.8390	0.8690	0.7410
	MHCNetSeq	0.7610	0.8330	0.4850	0.6590	0.3390
HLA-C*02:02	Anthem	0.9890	0.9330	0.9500	0.9420	0.8860
	MixMHCpred-2.0.2	0.9800	0.9580	0.9830	0.9710	0.9420
	HLAB	0.9583	1.0000	0.9200	0.9592	0.9215
	NetMHCcons-1.1	0.9480	0.8710	0.9170	0.8940	0.7900
	NetMHCstabpan-1.0	0.9460	0.9210	0.8630	0.8920	0.7860
	NetMHCpan-4.1	0.9430	0.8960	0.8750	0.8860	0.7720
	MHCNetSeq	0.8570	0.7620	0.7460	0.7540	0.5100
HLA-C*03:03	NetMHCstabpan-1.0	0.9580	0.9240	0.9440	0.9340	0.8680
	NetMHCpan-4.1	0.9570	0.9240	0.9380	0.9310	0.8620
	MixMHCpred-2.0.2	0.9560	0.9090	0.9680	0.9380	0.8780

	NetMHCcons-1.1	0.9530	0.9180	0.9350	0.9260	0.8540
	HLAB	0.9462	0.9412	0.8857	0.9130	0.8276
	Anthem	0.9450	0.8650	0.9540	0.9090	0.8230
	MHCNetSeq	0.9440	0.9380	0.8910	0.9150	0.8310
HLA-C*03:04	MixMHCpred-2.0.2	0.9950	0.9600	0.9790	0.9690	0.9390
	Anthem	0.9930	0.9510	0.9620	0.9570	0.9140
	NetMHCpan-4.1	0.9920	0.9630	0.9650	0.9640	0.9280
	HLAB	0.9903	0.9649	0.9310	0.9478	0.8962
	NetMHCcons-1.1	0.9860	0.9650	0.9510	0.9580	0.9160
	NetMHCstabpan-1.0	0.9860	0.9630	0.9490	0.9560	0.9130
	MHCNetSeq	0.9710	0.9260	0.9000	0.9130	0.8270
HLA-C*04:01	Anthem	0.9610	0.8660	0.9550	0.9100	0.8240
	MixMHCpred-2.0.2	0.9540	0.8970	0.9160	0.9060	0.8130
	NetMHCpan-4.1	0.9530	0.8780	0.9270	0.9020	0.8050
	HLAB	0.9434	0.8797	0.9560	0.9180	0.8383
	NetMHCstabpan-1.0	0.9390	0.8490	0.9100	0.8790	0.7600
	NetMHCcons-1.1	0.9230	0.8410	0.8640	0.8530	0.7060
	MHCNetSeq	0.8500	0.7400	0.8230	0.7820	0.5660
HLA-C*05:01	Anthem	0.9970	0.9760	0.9830	0.9800	0.9590
	MixMHCpred-2.0.2	0.9970	0.9730	0.9870	0.9800	0.9600
	NetMHCpan-4.1	0.9970	0.9890	0.9800	0.9840	0.9690
	NetMHCstabpan-1.0	0.9960	0.9830	0.9740	0.9790	0.9580
	NetMHCcons-1.1	0.9950	0.9850	0.9690	0.9770	0.9540
	HLAB	0.9902	0.9861	0.9517	0.9689	0.9383
	MHCNetSeq	0.9270	0.9930	0.4510	0.7220	0.5280
HLA-C*06:02	HLAB	0.9810	0.9714	0.9444	0.9577	0.9159
	MixMHCpred-2.0.2	0.9810	0.9430	0.9830	0.9630	0.9270
	NetMHCcons-1.1	0.9700	0.9430	0.9110	0.9270	0.8550
	NetMHCpan-4.1	0.9680	0.9030	0.9170	0.9100	0.8210
	Anthem	0.9580	0.8290	0.9500	0.8890	0.7900
	NetMHCstabpan-1.0	0.9570	0.9140	0.8710	0.8930	0.7880
	MHCNetSeq	0.7340	0.7290	0.7110	0.7200	0.4420
HLA-C*07:01	NetMHCpan-4.1	0.9880	0.9580	0.9730	0.9660	0.9320
	NetMHCstabpan-1.0	0.9870	0.9800	0.9490	0.9650	0.9300
	NetMHCcons-1.1	0.9800	0.9620	0.9200	0.9410	0.8840
	MixMHCpred-2.0.2	0.9690	0.9420	0.9020	0.9220	0.8460
	Anthem	0.9650	0.9240	0.9130	0.9190	0.8380
	HLAB	0.9367	0.9778	0.8696	0.9231	0.8515
	MHCNetSeq	0.8450	0.7850	0.7800	0.7820	0.5670
HLA-C*07:02	HLAB	0.9997	0.9811	0.9815	0.9813	0.9626
	Anthem	0.9960	0.9770	0.9690	0.9730	0.9470
	NetMHCpan-4.1	0.9960	0.9640	0.9770	0.9710	0.9420
	MixMHCpred-2.0.2	0.9950	0.9940	0.9730	0.9840	0.9680
	NetMHCcons-1.1	0.9940	0.9750	0.9660	0.9710	0.9420

	NetMHCstabpan-1.0	0.9900	0.9600	0.9560	0.9580	0.9180
	MHCNetSeq	0.9480	0.8760	0.8550	0.8650	0.7310
HLA-C*07:04	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCpan-4.1	0.9930	0.9950	0.9890	0.9920	0.9850
	NetMHCstabpan-1.0	0.9880	1.0000	0.9740	0.9870	0.9750
	Anthem	0.9790	0.8530	0.9480	0.9000	0.8060
	NetMHCcons-1.1	0.9790	0.9890	0.9580	0.9740	0.9490
	MHCNetSeq	0.7370	0.8100	0.5840	0.6970	0.4070
HLA-C*08:02	MixMHCpred-2.0.2	0.9990	0.9920	0.9890	0.9910	0.9810
	Anthem	0.9980	0.9850	0.9850	0.9850	0.9700
	NetMHCpan-4.1	0.9980	1.0000	0.9880	0.9940	0.9880
	HLAB	0.9970	0.9691	1.0000	0.9846	0.9697
	NetMHCcons-1.1	0.9950	0.9790	0.9750	0.9770	0.9540
	NetMHCstabpan-1.0	0.9950	0.9760	0.9710	0.9740	0.9480
	MHCNetSeq	0.8990	0.9440	0.6610	0.8030	0.6320
HLA-C*12:03	MixMHCpred-2.0.2	0.9920	0.9670	0.9600	0.9630	0.9270
	NetMHCpan-4.1	0.9810	0.9800	0.9430	0.9620	0.9250
	NetMHCcons-1.1	0.9760	0.9670	0.9270	0.9470	0.8960
	NetMHCstabpan-1.0	0.9700	0.9500	0.9200	0.9350	0.8710
	Anthem	0.9690	0.9260	0.9550	0.9410	0.8830
	HLAB	0.9634	1.0000	0.8065	0.9016	0.8198
	MHCNetSeq	0.7670	0.7260	0.7070	0.7170	0.4350
HLA-C*14:02	MixMHCpred-2.0.2	1.0000	0.9980	0.9950	0.9960	0.9930
	Anthem	0.9990	0.9880	0.9960	0.9920	0.9830
	NetMHCpan-4.1	0.9990	0.9970	0.9930	0.9950	0.9900
	HLAB	0.9977	0.9897	0.9898	0.9897	0.9795
	NetMHCcons-1.1	0.9940	0.9880	0.9650	0.9760	0.9530
	NetMHCstabpan-1.0	0.9930	0.9950	0.9560	0.9750	0.9520
	MHCNetSeq	0.6030	0.6910	0.5030	0.5970	0.1970
HLA-C*15:02	NetMHCpan-4.1	0.9920	1.0000	0.9640	0.9820	0.9650
	MixMHCpred-2.0.2	0.9900	0.9490	0.9510	0.9500	0.9000
	Anthem	0.9890	0.9230	0.9570	0.9400	0.8820
	HLAB	0.9878	1.0000	0.9250	0.9620	0.9268
	NetMHCcons-1.1	0.9840	0.9820	0.9560	0.9690	0.9390
	NetMHCstabpan-1.0	0.9830	0.9900	0.9410	0.9650	0.9320
	MHCNetSeq	0.8730	0.8160	0.8410	0.8280	0.6580
HLA-C*16:01	NetMHCpan-4.1	0.9880	0.9690	0.9410	0.9550	0.9110
	Anthem	0.9870	0.9420	0.9580	0.9500	0.9000
	MixMHCpred-2.0.2	0.9840	0.9360	0.9460	0.9420	0.8830
	HLAB	0.9796	0.9613	0.9423	0.9518	0.9037
	NetMHCstabpan-1.0	0.9490	0.9360	0.8750	0.9060	0.8130
	NetMHCcons-1.1	0.9470	0.9290	0.8730	0.9010	0.8040
	MHCNetSeq	0.8440	0.8840	0.4770	0.6800	0.3950
HLA-C*17:01	MixMHCpred-2.0.2	0.9880	0.9640	0.9640	0.9640	0.9290

		NetMHCpan-4.1	0.9810	0.9600	0.9400	0.9500	0.9010
		Anthem	0.9720	0.8080	0.9460	0.8770	0.7620
		NetMHCstabpan-1.0	0.9710	0.9320	0.9320	0.9320	0.8650
		NetMHCcons-1.1	0.9480	0.9120	0.9240	0.9180	0.8380
		HLAB	0.9477	0.9600	0.8077	0.8824	0.7749
		MHCNetSeq	0.7780	0.7240	0.7600	0.7420	0.4910
9	HLA-A*01:01	NetMHCpan-4.1	0.9850	0.9520	0.9540	0.9530	0.9060
		NetMHCcons-1.1	0.9830	0.9410	0.9460	0.9440	0.8870
		NetMHCstabpan-1.0	0.9830	0.9350	0.9490	0.9420	0.8840
		Anthem	0.9820	0.9380	0.9590	0.9490	0.8970
		ACME	0.9790	0.9340	0.9420	0.9380	0.8770
		HLAB	0.9780	0.9416	0.9522	0.9469	0.8938
		MixMHCpred-2.0.2	0.9760	0.9370	0.9430	0.9400	0.8800
		DeepSeqPan	0.9680	0.9060	0.9290	0.9180	0.8360
		MHCNetSeq	0.9580	0.8980	0.9040	0.9010	0.8020
	HLA-A*02:01	HLAB	0.9599	0.9005	0.9183	0.9094	0.8190
		Anthem	0.9560	0.8770	0.9200	0.8990	0.7990
		NetMHCpan-4.1	0.9560	0.8900	0.9060	0.8980	0.7960
		NetMHCstabpan-1.0	0.9560	0.8920	0.9030	0.8970	0.7950
		NetMHCcons-1.1	0.9550	0.8870	0.9070	0.8970	0.7940
		ACME	0.9510	0.8910	0.9110	0.9010	0.8030
		DeepSeqPan	0.9440	0.8750	0.8940	0.8850	0.7700
		MixMHCpred-2.0.2	0.9430	0.8700	0.8900	0.8800	0.7600
		MHCNetSeq	0.9380	0.8750	0.9020	0.8880	0.7770
	HLA-A*02:02	HLAB	0.9645	0.9238	0.9175	0.9207	0.8413
		MixMHCpred-2.0.2	0.9630	0.9310	0.8950	0.9130	0.8270
		ACME	0.9610	0.9430	0.8960	0.9190	0.8390
		Anthem	0.9520	0.9510	0.8640	0.9070	0.8180
		NetMHCstabpan-1.0	0.9510	0.9100	0.8770	0.8940	0.7890
		NetMHCpan-4.1	0.9500	0.9200	0.8790	0.9000	0.8010
		NetMHCcons-1.1	0.9500	0.8940	0.8870	0.8910	0.7820
		DeepSeqPan	0.9410	0.8970	0.8710	0.8840	0.7690
		MHCNetSeq	0.9050	0.8530	0.8620	0.8580	0.7160
	HLA-A*02:03	ACME	0.9770	0.9410	0.9180	0.9300	0.8590
		NetMHCstabpan-1.0	0.9730	0.9400	0.9070	0.9240	0.8470
		NetMHCpan-4.1	0.9720	0.9360	0.9040	0.9200	0.8420
		NetMHCcons-1.1	0.9720	0.9360	0.9090	0.9220	0.8450
		HLAB	0.9716	0.9599	0.9123	0.9361	0.8732
		Anthem	0.9700	0.9460	0.8800	0.9130	0.8280
		DeepSeqPan	0.9650	0.9190	0.8990	0.9090	0.8180
		MHCNetSeq	0.9490	0.8950	0.8850	0.8900	0.7800
		MixMHCpred-2.0.2	0.9480	0.8880	0.8640	0.8760	0.7520
	HLA-A*02:04	MixMHCpred-2.0.2	0.9860	0.9370	0.9490	0.9430	0.8860
		NetMHCpan-4.1	0.9860	0.9550	0.9550	0.9550	0.9100

	MHCNetSeq	0.9860	0.9500	0.9550	0.9520	0.9040
	NetMHCcons-1.1	0.9830	0.9580	0.9520	0.9550	0.9100
	NetMHCstabpan-1.0	0.9830	0.9590	0.9460	0.9530	0.9060
	ACME	0.9820	0.9460	0.9480	0.9470	0.8940
	Anthem	0.9800	0.9170	0.9620	0.9390	0.8800
	HLAB	0.9760	0.9457	0.9458	0.9458	0.8915
	DeepSeqPan	0.9750	0.9400	0.9350	0.9380	0.8750
HLA-B*07:02	NetMHCpan-4.1	0.9860	0.9560	0.9560	0.9560	0.9120
	NetMHCcons-1.1	0.9860	0.9560	0.9560	0.9560	0.9110
	NetMHCstabpan-1.0	0.9860	0.9550	0.9590	0.9570	0.9140
	HLAB	0.9847	0.9586	0.9396	0.9491	0.8983
	Anthem	0.9830	0.9420	0.9540	0.9480	0.8960
	MHCNetSeq	0.9790	0.9390	0.9420	0.9410	0.8810
	DeepSeqPan	0.9790	0.9380	0.9350	0.9360	0.8730
	MixMHCpred-2.0.2	0.9780	0.9370	0.9390	0.9380	0.8760
HLA-B*08:01	NetMHCpan-4.1	0.9870	0.9560	0.9560	0.9550	0.9110
	NetMHCcons-1.1	0.9850	0.9530	0.9520	0.9530	0.9050
	NetMHCstabpan-1.0	0.9850	0.9530	0.9500	0.9520	0.9040
	HLAB	0.9848	0.9394	0.9603	0.9498	0.8999
	ACME	0.9840	0.9490	0.9580	0.9540	0.9070
	Anthem	0.9800	0.9300	0.9420	0.9360	0.8710
	MixMHCpred-2.0.2	0.9740	0.9230	0.9270	0.9250	0.8500
	MHCNetSeq	0.9740	0.9210	0.9440	0.9330	0.8660
	DeepSeqPan	0.9700	0.9240	0.9150	0.9200	0.8400
HLA-B*13:02	Anthem	0.9960	0.9820	0.9780	0.9800	0.9600
	HLAB	0.9957	0.9751	0.9818	0.9785	0.9569
	MixMHCpred-2.0.2	0.9950	0.9770	0.9760	0.9760	0.9530
	NetMHCpan-4.1	0.9910	0.9640	0.9550	0.9600	0.9200
	NetMHCstabpan-1.0	0.9680	0.9310	0.8940	0.9120	0.8260
	NetMHCcons-1.1	0.9670	0.9320	0.8920	0.9120	0.8250
	MHCNetSeq	0.9300	0.8830	0.8510	0.8670	0.7350
	ACME	0.8590	0.7740	0.7750	0.7750	0.5490
HLA-B*14:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	1.0000	1.0000	1.0000	1.0000	1.0000
	Anthem	0.9970	1.0000	0.9840	0.9920	0.9850
	NetMHCstabpan-1.0	0.9920	0.9580	0.9630	0.9610	0.9220
	NetMHCcons-1.1	0.9910	0.9630	0.9630	0.9630	0.9270
	NetMHCpan-4.1	0.9900	0.9420	0.9790	0.9610	0.9220
	ACME	0.9890	0.9530	0.9680	0.9610	0.9230
	MHCNetSeq	0.9820	0.9370	0.9680	0.9530	0.9070
	DeepSeqPan	0.9810	0.9470	0.9630	0.9550	0.9120
HLA-B*14:02	Anthem	0.9870	0.9650	0.9350	0.9500	0.9000
	HLAB	0.9858	0.9832	0.9314	0.9573	0.9158
	NetMHCpan-4.1	0.9790	0.9760	0.9280	0.9520	0.9060

	NetMHCstabpan-1.0	0.9780	0.9600	0.9340	0.9470	0.8940
	NetMHCcons-1.1	0.9700	0.9630	0.9080	0.9350	0.8730
	MixMHCpred-2.0.2	0.9520	0.9020	0.8600	0.8810	0.7630
	ACME	0.9360	0.8680	0.8590	0.8640	0.7280
	DeepSeqPan	0.9090	0.8570	0.8150	0.8360	0.6720
	MHCNetSeq	0.8870	0.7870	0.7980	0.7930	0.5860
HLA-B*15:01	Anthem	0.9850	0.9500	0.9400	0.9450	0.8900
	NetMHCstabpan-1.0	0.9830	0.9470	0.9500	0.9490	0.8970
	NetMHCpan-4.1	0.9820	0.9510	0.9420	0.9460	0.8930
	MixMHCpred-2.0.2	0.9810	0.9420	0.9340	0.9380	0.8760
	NetMHCcons-1.1	0.9810	0.9430	0.9460	0.9440	0.8890
	HLAB	0.9805	0.9971	0.4579	0.7274	0.5402
	ACME	0.9800	0.9480	0.9430	0.9450	0.8910
	MHCNetSeq	0.9730	0.9380	0.9360	0.9370	0.8740
	DeepSeqPan	0.9660	0.9220	0.9050	0.9140	0.8270
HLA-B*15:02	Anthem	0.9790	0.9540	0.9560	0.9550	0.9110
	HLAB	0.9766	0.9811	0.9444	0.9626	0.9259
	MixMHCpred-2.0.2	0.9750	0.9410	0.9550	0.9480	0.8970
	NetMHCcons-1.1	0.9700	0.9620	0.9730	0.9680	0.9360
	MHCNetSeq	0.9700	0.9510	0.9020	0.9260	0.8550
	NetMHCpan-4.1	0.9690	0.9580	0.9700	0.9640	0.9290
	NetMHCstabpan-1.0	0.9690	0.9600	0.9600	0.9600	0.9210
	ACME	0.9690	0.9560	0.9530	0.9550	0.9100
	DeepSeqPan	0.9260	0.8870	0.8740	0.8800	0.7610
HLA-B*15:03	NetMHCcons-1.1	0.9790	0.9340	0.9340	0.9340	0.8690
	ACME	0.9790	0.9650	0.9350	0.9500	0.9010
	NetMHCpan-4.1	0.9740	0.9180	0.9340	0.9260	0.8530
	NetMHCstabpan-1.0	0.9740	0.9190	0.9290	0.9240	0.8490
	Anthem	0.9730	0.9020	0.9150	0.9090	0.8190
	HLAB	0.9691	0.8049	0.9518	0.8788	0.7655
	DeepSeqPan	0.9690	0.9410	0.9430	0.9420	0.8840
	MixMHCpred-2.0.2	0.9190	0.8960	0.8280	0.8620	0.7270
	MHCNetSeq	0.7970	0.7000	0.7770	0.7380	0.4830
HLA-B*15:09	ACME	0.9960	0.9900	0.9810	0.9860	0.9720
	MixMHCpred-2.0.2	0.9940	1.0000	0.9760	0.9880	0.9770
	NetMHCpan-4.1	0.9940	1.0000	0.9760	0.9880	0.9760
	NetMHCcons-1.1	0.9920	1.0000	0.9710	0.9860	0.9720
	HLAB	0.9913	0.8571	1.0000	0.9302	0.8685
	NetMHCstabpan-1.0	0.9900	0.9950	0.9710	0.9830	0.9670
	DeepSeqPan	0.9780	0.9620	0.9240	0.9430	0.8870
	Anthem	0.9740	0.7430	0.9650	0.8540	0.7280
	MHCNetSeq	0.9270	0.8670	0.8620	0.8640	0.7300
HLA-B*15:11	Anthem	0.9890	0.9660	0.9780	0.9720	0.9430
	MHCNetSeq	0.9800	0.9420	0.9260	0.9340	0.8680

	NetMHCpan-4.1	0.9700	0.9330	0.9220	0.9270	0.8550
	ACME	0.9690	0.9390	0.9270	0.9330	0.8650
	HLAB	0.9609	0.8973	0.9409	0.9191	0.8390
	NetMHCstabpan-1.0	0.9650	0.9230	0.9220	0.9230	0.8460
	NetMHCcons-1.1	0.9620	0.9180	0.9100	0.9140	0.8280
HLA-B*15:17	MixMHCpred-2.0.2	0.9690	0.9400	0.9020	0.9210	0.8440
	Anthem	0.9570	0.9130	0.8770	0.8950	0.7920
	ACME	0.9530	0.9070	0.8850	0.8960	0.7930
	NetMHCpan-4.1	0.9480	0.9130	0.8800	0.8960	0.7940
	NetMHCcons-1.1	0.9440	0.8980	0.8810	0.8890	0.7800
	NetMHCstabpan-1.0	0.9440	0.9030	0.8830	0.8930	0.7870
	DeepSeqPan	0.9080	0.8420	0.8470	0.8450	0.6910
	HLAB	0.9037	0.9192	0.8200	0.8693	0.7426
	MHCNetSeq	0.8270	0.7380	0.8330	0.7860	0.5750
HLA-B*15:18	HLAB	0.9955	0.9954	0.9862	0.9908	0.9816
	Anthem	0.9950	0.9890	0.9870	0.9880	0.9760
	MixMHCpred-2.0.2	0.9950	0.9940	0.9930	0.9940	0.9880
	NetMHCpan-4.1	0.9910	0.9810	0.9600	0.9710	0.9420
	NetMHCcons-1.1	0.9860	0.9720	0.9610	0.9670	0.9330
	NetMHCstabpan-1.0	0.9860	0.9710	0.9640	0.9670	0.9350
	ACME	0.9810	0.9690	0.9520	0.9600	0.9210
	MHCNetSeq	0.7890	0.7020	0.7230	0.7120	0.4250
HLA-B*15:42	MixMHCpred-2.0.2	0.9830	0.9310	0.9480	0.9400	0.8790
	Anthem	0.9720	0.9210	0.9030	0.9120	0.8270
	HLAB	0.9475	0.9155	0.9167	0.9161	0.8322
	NetMHCstabpan-1.0	0.9410	0.8840	0.8870	0.8860	0.7720
	NetMHCpan-4.1	0.9300	0.8760	0.8820	0.8790	0.7580
	NetMHCcons-1.1	0.8790	0.8560	0.7730	0.8150	0.6330
	DeepSeqPan	0.8650	0.7970	0.7920	0.7950	0.5900
	ACME	0.8050	0.8340	0.7110	0.7730	0.5500
HLA-B*18:01	ACME	0.9900	0.9530	0.9650	0.9590	0.9180
	NetMHCpan-4.1	0.9880	0.9530	0.9540	0.9530	0.9060
	NetMHCcons-1.1	0.9880	0.9560	0.9560	0.9560	0.9110
	NetMHCstabpan-1.0	0.9870	0.9510	0.9520	0.9520	0.9040
	Anthem	0.9850	0.9300	0.9550	0.9430	0.8860
	MixMHCpred-2.0.2	0.9780	0.9240	0.9280	0.9260	0.8520
	HLAB	0.9772	0.9591	0.9520	0.9556	0.9112
	DeepSeqPan	0.9720	0.9200	0.9260	0.9230	0.8460
	MHCNetSeq	0.9710	0.9180	0.9320	0.9250	0.8510
HLA-B*18:03	Anthem	0.9990	0.9880	0.9820	0.9850	0.9700
	MixMHCpred-2.0.2	0.9990	1.0000	0.9910	0.9950	0.9910
	NetMHCpan-4.1	0.9900	0.9600	0.9810	0.9700	0.9410
	ACME	0.9870	0.9470	0.9470	0.9470	0.8950
	NetMHCcons-1.1	0.9840	0.9690	0.9500	0.9600	0.9200

	NetMHCstabpan-1.0	0.9830	0.9630	0.9380	0.9500	0.9010
	MHCNetSeq	0.9780	0.9380	0.9560	0.9470	0.8940
	HLAB	0.9337	1.0000	0.8485	0.9231	0.8566
HLA-B*27:01	MixMHCpred-2.0.2	0.9970	0.9910	0.9830	0.9880	0.9750
	NetMHCpan-4.1	0.9970	0.9930	0.9810	0.9870	0.9750
	Anthem	0.9960	0.9930	0.9760	0.9840	0.9690
	ACME	0.9950	0.9860	0.9710	0.9790	0.9580
	MHCNetSeq	0.9950	0.9840	0.9690	0.9770	0.9530
	NetMHCcons-1.1	0.9890	0.9660	0.9430	0.9550	0.9100
	NetMHCstabpan-1.0	0.9890	0.9610	0.9440	0.9530	0.9060
	HLAB	0.9886	0.9894	0.9683	0.9789	0.9579
	DeepSeqPan	0.8780	0.8260	0.7900	0.8080	0.6160
HLA-B*27:02	MixMHCpred-2.0.2	0.9960	0.9820	0.9840	0.9830	0.9670
	HLAB	0.9952	0.9922	0.9884	0.9903	0.9806
	Anthem	0.9940	0.9830	0.9840	0.9830	0.9670
	NetMHCpan-4.1	0.9930	0.9810	0.9780	0.9800	0.9590
	NetMHCstabpan-1.0	0.9910	0.9850	0.9710	0.9780	0.9560
	MHCNetSeq	0.9910	0.9700	0.9710	0.9710	0.9410
	ACME	0.9890	0.9780	0.9650	0.9720	0.9430
	NetMHCcons-1.1	0.9880	0.9680	0.9590	0.9630	0.9270
	DeepSeqPan	0.9690	0.9390	0.9100	0.9240	0.8500
HLA-B*27:03	MHCNetSeq	0.9960	0.9810	0.9740	0.9780	0.9560
	HLAB	0.9882	0.9804	0.9806	0.9805	0.9610
	MixMHCpred-2.0.2	0.9880	0.9370	0.9740	0.9560	0.9120
	NetMHCpan-4.1	0.9860	0.9520	0.9600	0.9560	0.9130
	Anthem	0.9850	0.9240	0.9790	0.9520	0.9050
	ACME	0.9720	0.9210	0.9700	0.9450	0.8910
	NetMHCcons-1.1	0.9680	0.9310	0.9810	0.9560	0.9140
	NetMHCstabpan-1.0	0.9680	0.9310	0.9820	0.9570	0.9150
	DeepSeqPan	0.9510	0.8810	0.9110	0.8960	0.7930
HLA-B*27:04	MixMHCpred-2.0.2	0.9950	0.9760	0.9650	0.9710	0.9410
	Anthem	0.9930	0.9730	0.9690	0.9710	0.9430
	HLAB	0.9928	0.9807	0.9735	0.9771	0.9542
	NetMHCpan-4.1	0.9900	0.9630	0.9600	0.9610	0.9230
	NetMHCstabpan-1.0	0.9890	0.9650	0.9510	0.9580	0.9170
	NetMHCcons-1.1	0.9880	0.9570	0.9510	0.9540	0.9090
	ACME	0.9870	0.9480	0.9550	0.9510	0.9030
	MHCNetSeq	0.9770	0.9390	0.9460	0.9430	0.8850
	DeepSeqPan	0.9730	0.9250	0.9470	0.9360	0.8720
HLA-B*27:05	HLAB	0.9365	0.8273	0.9167	0.8720	0.7470
	Anthem	0.9130	0.8100	0.8560	0.8330	0.6670
	MixMHCpred-2.0.2	0.8780	0.7830	0.7920	0.7880	0.5760
	NetMHCpan-4.1	0.8620	0.7480	0.7950	0.7720	0.5440
	ACME	0.8610	0.7410	0.8080	0.7740	0.5490

	NetMHCcons-1.1	0.8570	0.7290	0.8060	0.7670	0.5360
	NetMHCstabpan-1.0	0.8570	0.7280	0.8090	0.7680	0.5380
	DeepSeqPan	0.8300	0.7060	0.8010	0.7530	0.5090
	MHCNetSeq	0.8100	0.7060	0.8090	0.7570	0.5170
HLA-B*27:06	Anthem	0.9920	0.9530	0.9680	0.9610	0.9220
	MixMHCpred-2.0.2	0.9920	0.9490	0.9700	0.9600	0.9200
	MHCNetSeq	0.9890	0.9540	0.9480	0.9510	0.9030
	HLAB	0.9833	0.9691	0.9387	0.9538	0.9081
	NetMHCpan-4.1	0.9810	0.9220	0.9730	0.9470	0.8960
	ACME	0.9810	0.9450	0.9560	0.9510	0.9010
	NetMHCstabpan-1.0	0.9780	0.9400	0.9460	0.9430	0.8870
	NetMHCcons-1.1	0.9760	0.9370	0.9430	0.9400	0.8800
	DeepSeqPan	0.9650	0.9270	0.9330	0.9300	0.8600
HLA-B*27:07	MixMHCpred-2.0.2	0.9990	0.9890	0.9890	0.9890	0.9790
	NetMHCpan-4.1	0.9970	0.9960	0.9860	0.9910	0.9820
	Anthem	0.9950	0.9910	0.9820	0.9870	0.9730
	ACME	0.9950	0.9840	0.9760	0.9800	0.9600
	HLAB	0.9944	0.9864	0.9865	0.9865	0.9729
	MHCNetSeq	0.9940	0.9870	0.9690	0.9780	0.9560
	NetMHCstabpan-1.0	0.9920	0.9670	0.9680	0.9680	0.9350
	NetMHCcons-1.1	0.9910	0.9700	0.9560	0.9630	0.9260
HLA-B*27:08	HLAB	0.9977	0.9947	0.9947	0.9947	0.9894
	Anthem	0.9950	0.9890	0.9800	0.9850	0.9700
	MixMHCpred-2.0.2	0.9950	0.9880	0.9850	0.9860	0.9720
	NetMHCpan-4.1	0.9920	0.9890	0.9720	0.9800	0.9610
	NetMHCstabpan-1.0	0.9900	0.9810	0.9650	0.9730	0.9470
	NetMHCcons-1.1	0.9890	0.9920	0.9570	0.9750	0.9500
	ACME	0.9880	0.9700	0.9630	0.9660	0.9330
HLA-B*27:09	HLAB	0.9853	0.9066	0.9705	0.9386	0.8789
	Anthem	0.9700	0.8940	0.9270	0.9100	0.8220
	NetMHCpan-4.1	0.9530	0.8770	0.8980	0.8880	0.7760
	MixMHCpred-2.0.2	0.9470	0.8720	0.8740	0.8730	0.7460
	NetMHCcons-1.1	0.9120	0.7760	0.9070	0.8410	0.6890
	NetMHCstabpan-1.0	0.9120	0.7720	0.9130	0.8430	0.6930
	ACME	0.9100	0.7650	0.9010	0.8330	0.6730
	MHCNetSeq	0.8990	0.8000	0.8580	0.8290	0.6600
HLA-B*27:20	MixMHCpred-2.0.2	0.9990	1.0000	0.9950	0.9970	0.9950
	NetMHCcons-1.1	0.9950	0.9950	0.9790	0.9870	0.9750
	NetMHCstabpan-1.0	0.9950	0.9950	0.9790	0.9870	0.9740
	NetMHCpan-4.1	0.9940	0.9840	0.9790	0.9820	0.9640
	DeepSeqPan	0.9800	0.9740	0.9260	0.9500	0.9030
	ACME	0.9780	0.9580	0.9310	0.9450	0.8910
	Anthem	0.9770	0.8840	0.9800	0.9320	0.8710
	HLAB	0.9763	0.8947	0.9500	0.9231	0.8470

	MHCNetSeq	0.8670	0.8050	0.8210	0.8130	0.6310
HLA-B*35:01	NetMHCpan-4.1	0.9780	0.9480	0.9410	0.9440	0.8890
	HLAB	0.9700	0.9387	0.9424	0.9406	0.8812
	NetMHCstabpan-1.0	0.9770	0.9470	0.9370	0.9420	0.8840
	Anthem	0.9760	0.9360	0.9370	0.9370	0.8730
	NetMHCcons-1.1	0.9760	0.9410	0.9370	0.9390	0.8780
	ACME	0.9750	0.9450	0.9310	0.9380	0.8770
	MixMHCpred-2.0.2	0.9620	0.9140	0.8940	0.9040	0.8080
	DeepSeqPan	0.9430	0.8880	0.8660	0.8770	0.7530
	MHCNetSeq	0.9420	0.8590	0.8940	0.8760	0.7530
HLA-B*35:03	Anthem	0.9950	0.9720	0.9640	0.9680	0.9360
	HLAB	0.9947	0.9823	0.9755	0.9789	0.9578
	MixMHCpred-2.0.2	0.9940	0.9600	0.9680	0.9640	0.9280
	NetMHCpan-4.1	0.9940	0.9750	0.9620	0.9690	0.9370
	NetMHCstabpan-1.0	0.9930	0.9720	0.9600	0.9660	0.9320
	NetMHCcons-1.1	0.9920	0.9670	0.9590	0.9630	0.9260
	ACME	0.9910	0.9670	0.9570	0.9620	0.9240
	DeepSeqPan	0.9810	0.9270	0.9440	0.9360	0.8720
	MHCNetSeq	0.9730	0.9310	0.9200	0.9250	0.8510
HLA-B*35:08	Anthem	0.9830	0.9200	0.9550	0.9370	0.8760
	NetMHCpan-4.1	0.9810	0.9640	0.9520	0.9580	0.9170
	HLAB	0.9802	0.9124	0.9590	0.9357	0.8724
	ACME	0.9780	0.9580	0.9430	0.9500	0.9010
	NetMHCcons-1.1	0.9770	0.9520	0.9510	0.9510	0.9030
	NetMHCstabpan-1.0	0.9770	0.9510	0.9470	0.9490	0.8990
	MixMHCpred-2.0.2	0.9630	0.8820	0.9110	0.8970	0.7950
	MHCNetSeq	0.9580	0.8830	0.9060	0.8940	0.7890
	DeepSeqPan	0.9440	0.8830	0.8800	0.8820	0.7640
HLA-B*37:01	Anthem	0.9950	0.9770	0.9780	0.9780	0.9550
	HLAB	0.9911	0.9753	0.9739	0.9746	0.9492
	NetMHCpan-4.1	0.9910	0.9910	0.9680	0.9790	0.9590
	NetMHCstabpan-1.0	0.9910	0.9700	0.9610	0.9660	0.9320
	NetMHCcons-1.1	0.9900	0.9640	0.9570	0.9610	0.9220
	ACME	0.9880	0.9600	0.9570	0.9590	0.9180
	MHCNetSeq	0.9630	0.9100	0.9160	0.9130	0.8260
	DeepSeqPan	0.9610	0.9250	0.9260	0.9250	0.8500
	MixMHCpred-2.0.2	0.9530	0.9220	0.8730	0.8970	0.7960
HLA-B*38:01	Anthem	0.9980	0.9920	0.9880	0.9900	0.9800
	MixMHCpred-2.0.2	0.9980	0.9880	0.9890	0.9890	0.9780
	NetMHCpan-4.1	0.9970	0.9870	0.9810	0.9850	0.9690
	NetMHCcons-1.1	0.9960	0.9830	0.9720	0.9780	0.9550
	ACME	0.9950	0.9800	0.9720	0.9760	0.9520
	HLAB	0.9944	0.9859	0.9859	0.9859	0.9718
	NetMHCstabpan-1.0	0.9930	0.9720	0.9660	0.9690	0.9380

	MHCNetSeq	0.9860	0.9530	0.9430	0.9480	0.8960
	DeepSeqPan	0.9790	0.9360	0.9220	0.9290	0.8590
HLA-B*39:01	NetMHCpan-4.1	0.9890	0.9630	0.9510	0.9570	0.9150
	Anthem	0.9880	0.9440	0.9540	0.9490	0.8980
	HLAB	0.9862	0.9717	0.9717	0.9717	0.9434
	ACME	0.9850	0.9600	0.9430	0.9520	0.9040
	NetMHCcons-1.1	0.9830	0.9420	0.9340	0.9380	0.8760
	NetMHCstabpan-1.0	0.9830	0.9450	0.9340	0.9400	0.8790
	MixMHCpred-2.0.2	0.9810	0.9320	0.9380	0.9350	0.8700
	MHCNetSeq	0.9760	0.9290	0.9330	0.9310	0.8620
	DeepSeqPan	0.9460	0.8890	0.8620	0.8750	0.7510
HLA-B*39:06	HLAB	0.9970	0.9937	0.9716	0.9826	0.9655
	Anthem	0.9960	0.9840	0.9840	0.9840	0.9680
	MixMHCpred-2.0.2	0.9960	0.9810	0.9810	0.9810	0.9620
	NetMHCpan-4.1	0.9930	0.9680	0.9650	0.9660	0.9330
	ACME	0.9700	0.9360	0.9160	0.9260	0.8520
	NetMHCstabpan-1.0	0.9600	0.9130	0.8960	0.9050	0.8100
	NetMHCcons-1.1	0.9580	0.9100	0.8940	0.9020	0.8040
	MHCNetSeq	0.9390	0.8800	0.8710	0.8750	0.7510
HLA-B*39:24	MixMHCpred-2.0.2	0.9890	0.9580	0.9750	0.9670	0.9330
	MHCNetSeq	0.9890	0.9660	0.9580	0.9620	0.9240
	Anthem	0.9880	0.9590	0.9750	0.9670	0.9340
	NetMHCpan-4.1	0.9880	0.9780	0.9610	0.9700	0.9400
	ACME	0.9840	0.9680	0.9440	0.9560	0.9130
	NetMHCstabpan-1.0	0.9810	0.9750	0.9220	0.9480	0.8980
	HLAB	0.9779	0.9588	0.9286	0.9436	0.8876
	NetMHCcons-1.1	0.9780	0.9640	0.9200	0.9420	0.8850
HLA-C*01:02	NetMHCpan-4.1	0.9960	0.9800	0.9710	0.9760	0.9520
	HLAB	0.9923	0.9771	0.9810	0.9790	0.9581
	NetMHCcons-1.1	0.9900	0.9680	0.9550	0.9620	0.9240
	Anthem	0.9890	0.9370	0.9610	0.9490	0.8980
	MixMHCpred-2.0.2	0.9890	0.9470	0.9470	0.9470	0.8940
	NetMHCstabpan-1.0	0.9870	0.9500	0.9410	0.9450	0.8910
	MHCNetSeq	0.8730	0.7890	0.7990	0.7940	0.5890
HLA-C*02:02	Anthem	0.9800	0.9590	0.9130	0.9360	0.8730
	HLAB	0.9728	0.9680	0.9361	0.9521	0.9046
	NetMHCpan-4.1	0.9710	0.9530	0.9110	0.9320	0.8650
	NetMHCstabpan-1.0	0.9700	0.9550	0.9150	0.9350	0.8710
	NetMHCcons-1.1	0.9640	0.9480	0.8960	0.9220	0.8450
	MixMHCpred-2.0.2	0.9500	0.9010	0.8620	0.8810	0.7640
	MHCNetSeq	0.8550	0.7810	0.8070	0.7940	0.5880
HLA-C*03:03	Anthem	0.9850	0.9610	0.9400	0.9500	0.9010
	NetMHCpan-4.1	0.9700	0.9400	0.9210	0.9300	0.8610
	NetMHCstabpan-1.0	0.9700	0.9370	0.9170	0.9270	0.8550

	MixMHCpred-2.0.2	0.9670	0.9160	0.9060	0.9110	0.8220
	NetMHCcons-1.1	0.9640	0.9320	0.9000	0.9160	0.8320
	HLAB	0.9512	0.9979	0.7703	0.8840	0.7888
	DeepSeqPan	0.9040	0.8210	0.8330	0.8270	0.6550
	MHCNetSeq	0.8670	0.8040	0.7780	0.7900	0.5820
HLA-C*03:04	Anthem	0.9880	0.9750	0.9370	0.9560	0.9130
	NetMHCpan-4.1	0.9780	0.9680	0.9340	0.9510	0.9020
	NetMHCcons-1.1	0.9780	0.9740	0.9280	0.9510	0.9040
	NetMHCstabpan-1.0	0.9780	0.9690	0.9300	0.9500	0.9000
	MixMHCpred-2.0.2	0.9730	0.9250	0.9140	0.9190	0.8390
	HLAB	0.9707	0.9467	0.9657	0.9562	0.9125
	MHCNetSeq	0.8540	0.7810	0.7650	0.7730	0.5460
HLA-C*04:01	HLAB	0.9701	0.9167	0.9470	0.9319	0.8641
	Anthem	0.9620	0.9090	0.9140	0.9120	0.8230
	NetMHCpan-4.1	0.9560	0.9130	0.9090	0.9110	0.8220
	NetMHCstabpan-1.0	0.9520	0.9120	0.8990	0.9050	0.8100
	NetMHCcons-1.1	0.9420	0.8940	0.8710	0.8820	0.7650
	MixMHCpred-2.0.2	0.9190	0.8570	0.8390	0.8480	0.6960
	DeepSeqPan	0.8430	0.7820	0.7580	0.7700	0.5410
	MHCNetSeq	0.5530	0.4600	0.7500	0.6050	0.2190
HLA-C*05:01	Anthem	0.9910	0.9520	0.9570	0.9550	0.9100
	NetMHCpan-4.1	0.9900	0.9580	0.9500	0.9540	0.9080
	NetMHCstabpan-1.0	0.9870	0.9620	0.9440	0.9530	0.9060
	MixMHCpred-2.0.2	0.9860	0.9420	0.9300	0.9360	0.8720
	NetMHCcons-1.1	0.9860	0.9590	0.9380	0.9490	0.8980
	HLAB	0.9746	0.9768	0.9496	0.9632	0.9267
	DeepSeqPan	0.9530	0.8920	0.8780	0.8850	0.7700
	MHCNetSeq	0.9180	0.8470	0.8580	0.8530	0.7050
HLA-C*06:02	Anthem	0.9810	0.9490	0.9270	0.9380	0.8760
	HLAB	0.9772	0.9611	0.9322	0.9467	0.8937
	NetMHCpan-4.1	0.9760	0.9510	0.9300	0.9400	0.8810
	NetMHCstabpan-1.0	0.9720	0.9380	0.9230	0.9300	0.8610
	NetMHCcons-1.1	0.9670	0.9340	0.9060	0.9200	0.8410
	MixMHCpred-2.0.2	0.9560	0.8810	0.8930	0.8870	0.7740
	DeepSeqPan	0.8640	0.7860	0.7760	0.7810	0.5630
	MHCNetSeq	0.7710	0.6840	0.7800	0.7320	0.4660
HLA-C*07:01	Anthem	0.9750	0.9330	0.9240	0.9290	0.8570
	HLAB	0.9708	0.9606	0.9368	0.9487	0.8977
	NetMHCpan-4.1	0.9700	0.9560	0.9250	0.9400	0.8810
	NetMHCstabpan-1.0	0.9660	0.9430	0.9110	0.9270	0.8550
	NetMHCcons-1.1	0.9570	0.9190	0.8920	0.9060	0.8120
	MixMHCpred-2.0.2	0.9140	0.8550	0.8200	0.8370	0.6760
	DeepSeqPan	0.8550	0.7750	0.7920	0.7840	0.5680
	MHCNetSeq	0.8470	0.7640	0.7620	0.7630	0.5260

HLA-C*07:02	Anthem	0.9820	0.9530	0.9210	0.9370	0.8750
	NetMHCpan-4.1	0.9740	0.9370	0.9160	0.9260	0.8530
	NetMHCstabpan-1.0	0.9700	0.9150	0.9190	0.9170	0.8340
	NetMHCcons-1.1	0.9670	0.9170	0.9010	0.9090	0.8180
	MixMHCpred-2.0.2	0.9540	0.8910	0.8860	0.8880	0.7770
	HLAB	0.9493	0.8328	0.9358	0.8843	0.7728
	DeepSeqPan	0.8390	0.7450	0.7730	0.7590	0.5190
	MHCNetSeq	0.8020	0.7210	0.8100	0.7650	0.5320
HLA-C*07:04	Anthem	0.9800	0.9360	0.9290	0.9330	0.8660
	HLAB	0.9781	0.9615	0.8352	0.8983	0.8030
	NetMHCpan-4.1	0.9730	0.9600	0.9100	0.9350	0.8720
	NetMHCstabpan-1.0	0.9620	0.9470	0.8950	0.9210	0.8440
	NetMHCcons-1.1	0.9040	0.8500	0.8170	0.8330	0.6670
	MHCNetSeq	0.6510	0.5780	0.6640	0.6210	0.2430
HLA-C*08:02	Anthem	0.9870	0.9670	0.9370	0.9520	0.9050
	HLAB	0.9799	0.9593	0.9613	0.9603	0.9206
	NetMHCpan-4.1	0.9770	0.9690	0.9240	0.9460	0.8940
	NetMHCstabpan-1.0	0.9770	0.9570	0.9210	0.9390	0.8780
	NetMHCcons-1.1	0.9640	0.9340	0.8740	0.9040	0.8090
	MixMHCpred-2.0.2	0.9440	0.8830	0.8570	0.8700	0.7410
	DeepSeqPan	0.9270	0.8760	0.8250	0.8510	0.7030
	MHCNetSeq	0.8010	0.7390	0.7400	0.7400	0.4800
HLA-C*12:03	Anthem	0.9890	0.9600	0.9480	0.9540	0.9080
	HLAB	0.9845	0.9867	0.9069	0.9467	0.8964
	NetMHCcons-1.1	0.9810	0.9410	0.9260	0.9330	0.8670
	NetMHCpan-4.1	0.9800	0.9350	0.9210	0.9280	0.8560
	MixMHCpred-2.0.2	0.9760	0.9260	0.9150	0.9210	0.8410
	NetMHCstabpan-1.0	0.9720	0.9300	0.9100	0.9200	0.8410
	DeepSeqPan	0.9170	0.8720	0.8440	0.8580	0.7160
	MHCNetSeq	0.7980	0.7190	0.7560	0.7380	0.4760
HLA-C*14:02	NetMHCpan-4.1	0.9960	0.9840	0.9790	0.9810	0.9620
	Anthem	0.9930	0.9680	0.9670	0.9680	0.9350
	NetMHCstabpan-1.0	0.9930	0.9730	0.9600	0.9670	0.9340
	MixMHCpred-2.0.2	0.9920	0.9520	0.9650	0.9580	0.9170
	NetMHCcons-1.1	0.9920	0.9740	0.9620	0.9680	0.9360
	HLAB	0.9918	0.9836	0.9619	0.9727	0.9457
	DeepSeqPan	0.9390	0.8830	0.8510	0.8670	0.7350
	MHCNetSeq	0.5280	0.5020	0.5010	0.5020	0.0030
HLA-C*15:02	MixMHCpred-2.0.2	0.9890	0.9560	0.9600	0.9580	0.9170
	Anthem	0.9880	0.9590	0.9560	0.9580	0.9150
	NetMHCpan-4.1	0.9880	0.9640	0.9540	0.9590	0.9180
	NetMHCcons-1.1	0.9840	0.9730	0.9310	0.9520	0.9050
	NetMHCstabpan-1.0	0.9800	0.9460	0.9350	0.9400	0.8810
	HLAB	0.9769	0.9640	0.9392	0.9516	0.9035

		DeepSeqPan	0.9480	0.8830	0.8950	0.8890	0.7780
		MHCNetSeq	0.9260	0.8320	0.8710	0.8520	0.7050
	HLA-C*16:01	Anthem	0.9890	0.9720	0.9330	0.9530	0.9070
		HLAB	0.9831	0.9449	0.9572	0.9510	0.9021
		NetMHCpan-4.1	0.9800	0.9610	0.9140	0.9380	0.8760
		NetMHCstabpan-1.0	0.9670	0.9340	0.9100	0.9220	0.8440
		NetMHCcons-1.1	0.9660	0.9350	0.9060	0.9200	0.8410
		MixMHCpred-2.0.2	0.9600	0.8720	0.9030	0.8880	0.7760
		MHCNetSeq	0.6890	0.6280	0.6820	0.6550	0.3110
	HLA-C*17:01	Anthem	0.9830	0.9050	0.9580	0.9310	0.8640
		NetMHCpan-4.1	0.9790	0.9190	0.9410	0.9300	0.8610
		NetMHCstabpan-1.0	0.9690	0.9200	0.9190	0.9200	0.8390
		MixMHCpred-2.0.2	0.9620	0.9050	0.9480	0.9270	0.8540
		HLAB	0.9605	0.9167	0.9176	0.9172	0.8343
		NetMHCcons-1.1	0.9380	0.8640	0.9240	0.8940	0.7900
		MHCNetSeq	0.8550	0.8310	0.7750	0.8030	0.6070
10	HLA-A*01:01	NetMHCpan-4.1	0.9880	0.9570	0.9570	0.9570	0.9140
		Anthem	0.9860	0.9580	0.9510	0.9540	0.9090
		NetMHCcons-1.1	0.9810	0.9190	0.9320	0.9260	0.8510
		MixMHCpred-2.0.2	0.9800	0.9370	0.9370	0.9370	0.8740
		HLAB	0.9779	0.9843	0.9487	0.9665	0.9336
		NetMHCstabpan-1.0	0.9760	0.9070	0.9320	0.9200	0.8400
		ACME	0.9680	0.9050	0.9080	0.9060	0.8130
		MHCNetSeq	0.9420	0.8680	0.8760	0.8720	0.7440
	HLA-A*02:01	HLAB	0.9573	0.9754	0.7075	0.8414	0.7088
		Anthem	0.9480	0.8880	0.8850	0.8860	0.7730
		NetMHCcons-1.1	0.9430	0.8680	0.8870	0.8780	0.7560
		NetMHCstabpan-1.0	0.9420	0.8740	0.8760	0.8750	0.7500
		NetMHCpan-4.1	0.9330	0.8680	0.8770	0.8720	0.7440
		ACME	0.9310	0.8640	0.8880	0.8760	0.7530
		MixMHCpred-2.0.2	0.9190	0.8450	0.8480	0.8460	0.6930
		MHCNetSeq	0.9000	0.8190	0.8720	0.8450	0.6910
	HLA-A*02:02	MixMHCpred-2.0.2	0.9650	0.9400	0.9070	0.9230	0.8460
		HLAB	0.9572	0.9500	0.8856	0.9177	0.8372
		Anthem	0.9460	0.9590	0.8460	0.9020	0.8110
		NetMHCcons-1.1	0.9320	0.8670	0.8650	0.8660	0.7320
		NetMHCstabpan-1.0	0.9280	0.8710	0.8640	0.8680	0.7360
		ACME	0.9270	0.8930	0.8390	0.8660	0.7340
		NetMHCpan-4.1	0.9130	0.8550	0.8410	0.8480	0.6970
		MHCNetSeq	0.7830	0.6960	0.8090	0.7520	0.5080
	HLA-A*02:03	HLAB	0.9765	0.9500	0.9315	0.9407	0.8816
		Anthem	0.9640	0.9340	0.8850	0.9100	0.8210
		NetMHCcons-1.1	0.9590	0.9080	0.8850	0.8960	0.7930
		NetMHCstabpan-1.0	0.9560	0.9030	0.8840	0.8940	0.7880

	ACME	0.9550	0.9080	0.8710	0.8900	0.7800
	NetMHCpan-4.1	0.9450	0.8910	0.8700	0.8800	0.7610
	MixMHCpred-2.0.2	0.9030	0.7920	0.8540	0.8230	0.6480
	MHCNetSeq	0.8910	0.8180	0.8450	0.8320	0.6640
HLA-A*02:04	HLAB	0.9970	0.9355	1.0000	0.9683	0.9383
	NetMHCpan-4.1	0.9940	0.9710	0.9840	0.9780	0.9550
	MixMHCpred-2.0.2	0.9920	0.9680	0.9810	0.9740	0.9490
	NetMHCcons-1.1	0.9900	0.9710	0.9710	0.9710	0.9420
	NetMHCstabpan-1.0	0.9900	0.9680	0.9680	0.9680	0.9360
	ACME	0.9880	0.9420	0.9740	0.9580	0.9170
	MHCNetSeq	0.9880	0.9380	0.9710	0.9550	0.9100
	Anthem	0.9650	0.8190	0.9670	0.8930	0.7970
HLA-A*02:05	NetMHCcons-1.1	0.9870	0.9820	0.9650	0.9730	0.9470
	NetMHCpan-4.1	0.9860	0.9730	0.9610	0.9670	0.9350
	NetMHCstabpan-1.0	0.9860	0.9780	0.9600	0.9690	0.9380
	ACME	0.9850	0.9690	0.9530	0.9610	0.9230
	HLAB	0.9840	0.9733	0.9211	0.9470	0.8953
	MHCNetSeq	0.9760	0.9210	0.9200	0.9210	0.8420
	Anthem	0.9750	0.8720	0.9520	0.9120	0.8280
	MixMHCpred-2.0.2	0.9550	0.8780	0.9000	0.8890	0.7800
HLA-A*02:06	HLAB	0.9636	0.9671	0.8879	0.9274	0.8575
	Anthem	0.9510	0.9180	0.8700	0.8940	0.7890
	NetMHCstabpan-1.0	0.9490	0.9000	0.8690	0.8850	0.7700
	NetMHCcons-1.1	0.9480	0.9160	0.8560	0.8860	0.7740
	NetMHCpan-4.1	0.9370	0.8520	0.8740	0.8630	0.7270
	ACME	0.9370	0.9030	0.8470	0.8750	0.7520
	MHCNetSeq	0.8470	0.7510	0.8430	0.7970	0.5970
	MixMHCpred-2.0.2	0.7840	0.7310	0.7170	0.7240	0.4490
HLA-A*02:07	HLAB	0.9713	0.8913	0.9462	0.9189	0.8390
	MixMHCpred-2.0.2	0.9700	0.9280	0.9440	0.9360	0.8720
	MHCNetSeq	0.9630	0.9060	0.9340	0.9200	0.8400
	Anthem	0.9560	0.8700	0.9670	0.9180	0.8400
	NetMHCpan-4.1	0.9560	0.8950	0.9470	0.9210	0.8440
	NetMHCcons-1.1	0.9420	0.8890	0.9040	0.8970	0.7940
	NetMHCstabpan-1.0	0.9390	0.8970	0.8970	0.8970	0.7940
	ACME	0.8960	0.8210	0.8660	0.8430	0.6890
HLA-A*02:17	MixMHCpred-2.0.2	0.9950	0.9970	0.9900	0.9930	0.9870
	NetMHCstabpan-1.0	0.9910	0.9900	0.9670	0.9780	0.9570
	HLAB	0.9903	0.9000	1.0000	0.9508	0.9059
	NetMHCcons-1.1	0.9900	0.9900	0.9700	0.9800	0.9600
	NetMHCpan-4.1	0.9860	0.9870	0.9670	0.9770	0.9540
	Anthem	0.9850	0.9730	0.9530	0.9630	0.9280
	ACME	0.9800	0.9900	0.9330	0.9620	0.9250
	MHCNetSeq	0.9770	1.0000	0.9540	0.9760	0.9550

HLA-A*03:01	HLAB	0.9770	0.9577	0.9296	0.9436	0.8876
	NetMHCcons-1.1	0.9770	0.9460	0.9270	0.9360	0.8720
	NetMHCpan-4.1	0.9750	0.9340	0.9290	0.9310	0.8630
	NetMHCstabpan-1.0	0.9740	0.9260	0.9280	0.9270	0.8550
	ACME	0.9730	0.9340	0.9440	0.9390	0.8780
	Anthem	0.9720	0.9500	0.9210	0.9350	0.8720
	MixMHCpred-2.0.2	0.9480	0.8760	0.8900	0.8830	0.7660
	MHCNetSeq	0.9140	0.8250	0.8820	0.8540	0.7090
HLA-A*11:01	NetMHCcons-1.1	0.9830	0.9550	0.9270	0.9410	0.8830
	NetMHCpan-4.1	0.9820	0.9520	0.9300	0.9410	0.8820
	Anthem	0.9810	0.9530	0.9260	0.9390	0.8790
	NetMHCstabpan-1.0	0.9810	0.9460	0.9300	0.9380	0.8760
	ACME	0.9810	0.9560	0.9390	0.9480	0.8960
	HLAB	0.9748	0.9575	0.9423	0.9499	0.8999
	MHCNetSeq	0.9480	0.8760	0.9100	0.8930	0.7860
	MixMHCpred-2.0.2	0.9460	0.8690	0.8790	0.8740	0.7490
HLA-A*23:01	NetMHCcons-1.1	0.9820	0.9590	0.9350	0.9470	0.8940
	NetMHCpan-4.1	0.9810	0.9620	0.9520	0.9570	0.9140
	HLAB	0.9784	0.9322	0.9412	0.9367	0.8734
	NetMHCstabpan-1.0	0.9780	0.9440	0.9290	0.9360	0.8730
	ACME	0.9740	0.9580	0.9480	0.9530	0.9060
	Anthem	0.9680	0.8680	0.9570	0.9120	0.8280
	MixMHCpred-2.0.2	0.9600	0.9210	0.8990	0.9100	0.8210
	MHCNetSeq	0.9570	0.8950	0.9110	0.9030	0.8070
HLA-A*24:02	HLAB	0.9913	0.9680	0.9594	0.9637	0.9275
	NetMHCcons-1.1	0.9900	0.9650	0.9440	0.9550	0.9100
	Anthem	0.9890	0.9560	0.9470	0.9520	0.9040
	NetMHCstabpan-1.0	0.9890	0.9620	0.9420	0.9520	0.9040
	MixMHCpred-2.0.2	0.9880	0.9510	0.9420	0.9460	0.8930
	NetMHCpan-4.1	0.9880	0.9560	0.9530	0.9550	0.9100
	ACME	0.9860	0.9470	0.9500	0.9490	0.8970
	MHCNetSeq	0.9840	0.9470	0.9400	0.9430	0.8870
HLA-A*24:06	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	1.0000	1.0000	0.9950	0.9970	0.9950
	MHCNetSeq	0.9990	1.0000	0.9950	0.9970	0.9950
	NetMHCpan-4.1	0.9960	1.0000	0.9850	0.9920	0.9860
	NetMHCstabpan-1.0	0.9950	1.0000	0.9800	0.9900	0.9810
	NetMHCcons-1.1	0.9940	1.0000	0.9800	0.9900	0.9810
	Anthem	0.9810	0.9300	0.9740	0.9520	0.9060
HLA-A*26:01	ACME	0.9850	0.9720	0.9630	0.9680	0.9350
	HLAB	0.9801	0.9385	0.9697	0.9542	0.9088
	NetMHCcons-1.1	0.9790	0.9260	0.9430	0.9350	0.8700
	NetMHCpan-4.1	0.9770	0.9230	0.9580	0.9410	0.8820
	Anthem	0.9740	0.9410	0.9440	0.9430	0.8860

	NetMHCstabpan-1.0	0.9670	0.9050	0.9260	0.9150	0.8320
	MixMHCpred-2.0.2	0.9380	0.8970	0.8970	0.8970	0.7940
	MHCNetSeq	0.9240	0.8590	0.9170	0.8880	0.7770
HLA-A*29:02	MixMHCpred-2.0.2	0.9800	0.9420	0.9340	0.9380	0.8760
	HLAB	0.9770	0.9224	0.9512	0.9369	0.8741
	Anthem	0.9770	0.9200	0.9510	0.9360	0.8710
	NetMHCpan-4.1	0.9770	0.9310	0.9470	0.9390	0.8780
	NetMHCcons-1.1	0.9760	0.9300	0.9480	0.9390	0.8780
	ACME	0.9720	0.9370	0.9390	0.9380	0.8770
	NetMHCstabpan-1.0	0.9710	0.9250	0.9320	0.9280	0.8570
	MHCNetSeq	0.9320	0.8550	0.9180	0.8870	0.7750
HLA-A*30:01	Anthem	0.9230	0.8310	0.8580	0.8440	0.6920
	ACME	0.9190	0.8310	0.8620	0.8460	0.6980
	NetMHCcons-1.1	0.8910	0.8870	0.7740	0.8310	0.6670
	NetMHCpan-4.1	0.8560	0.8340	0.8230	0.8280	0.6590
	NetMHCstabpan-1.0	0.8270	0.7720	0.7590	0.7650	0.5320
	HLAB	0.8038	0.8718	0.4500	0.6582	0.3541
	MixMHCpred-2.0.2	0.7850	0.7280	0.7280	0.7280	0.4590
	MHCNetSeq	0.6660	0.5590	0.7900	0.6740	0.3590
HLA-A*30:02	MixMHCpred-2.0.2	0.9880	0.9720	0.9710	0.9710	0.9430
	NetMHCcons-1.1	0.9820	0.9660	0.9550	0.9610	0.9220
	ACME	0.9780	0.9620	0.9450	0.9540	0.9070
	Anthem	0.9760	0.9240	0.9500	0.9370	0.8750
	NetMHCpan-4.1	0.9720	0.9350	0.9510	0.9430	0.8860
	NetMHCstabpan-1.0	0.9670	0.9200	0.9250	0.9220	0.8460
	HLAB	0.9577	0.9014	0.9444	0.9231	0.8468
	MHCNetSeq	0.7920	0.6800	0.8750	0.7780	0.5680
HLA-A*31:01	HLAB	0.9680	0.9447	0.8941	0.9193	0.8397
	Anthem	0.9570	0.9290	0.8880	0.9080	0.8180
	NetMHCpan-4.1	0.9510	0.8990	0.8790	0.8890	0.7790
	NetMHCcons-1.1	0.9500	0.8990	0.8810	0.8900	0.7810
	NetMHCstabpan-1.0	0.9500	0.9000	0.8830	0.8920	0.7830
	ACME	0.9450	0.8990	0.8770	0.8880	0.7760
	MixMHCpred-2.0.2	0.8690	0.7890	0.8060	0.7980	0.5960
	MHCNetSeq	0.8490	0.7640	0.8320	0.7990	0.5990
HLA-A*32:01	ACME	0.9640	0.9150	0.9150	0.9150	0.8300
	NetMHCcons-1.1	0.9590	0.9010	0.9130	0.9070	0.8140
	Anthem	0.9570	0.8630	0.9420	0.9020	0.8070
	NetMHCpan-4.1	0.9560	0.9210	0.9470	0.9340	0.8680
	NetMHCstabpan-1.0	0.9430	0.8880	0.9090	0.8980	0.7980
	MixMHCpred-2.0.2	0.9390	0.8930	0.9010	0.8960	0.7930
	HLAB	0.9366	0.8783	0.9224	0.9004	0.8016
	MHCNetSeq	0.9180	0.8610	0.9140	0.8870	0.7760
HLA-A*33:01	HLAB	0.9824	1.0000	0.9242	0.9620	0.9267

	MixMHCpred-2.0.2	0.9810	0.9590	0.9360	0.9470	0.8950
	Anthem	0.9720	0.9460	0.9130	0.9300	0.8610
	NetMHCcons-1.1	0.9620	0.9400	0.8950	0.9170	0.8360
	NetMHCstabpan-1.0	0.9620	0.9410	0.9020	0.9210	0.8440
	ACME	0.9590	0.9120	0.9100	0.9110	0.8220
	NetMHCpan-4.1	0.9570	0.9160	0.9070	0.9110	0.8230
	MHCNetSeq	0.8520	0.7740	0.8270	0.8000	0.6020
HLA-A*68:01	HLAB	0.9845	0.8056	0.9751	0.8904	0.7922
	Anthem	0.9740	0.9430	0.9240	0.9340	0.8670
	ACME	0.9730	0.9530	0.9130	0.9340	0.8670
	NetMHCcons-1.1	0.9700	0.9420	0.9130	0.9270	0.8550
	NetMHCpan-4.1	0.9690	0.9450	0.9100	0.9270	0.8550
	NetMHCstabpan-1.0	0.9660	0.9280	0.9070	0.9170	0.8350
	MixMHCpred-2.0.2	0.9000	0.8070	0.8590	0.8330	0.6670
	MHCNetSeq	0.8370	0.7580	0.8220	0.7900	0.5820
HLA-A*68:02	HLAB	0.9436	0.9010	0.9046	0.9028	0.8056
	Anthem	0.9310	0.8710	0.8830	0.8770	0.7550
	NetMHCcons-1.1	0.9200	0.8600	0.8650	0.8630	0.7260
	ACME	0.9200	0.8580	0.8980	0.8780	0.7560
	NetMHCstabpan-1.0	0.9180	0.8600	0.8620	0.8610	0.7220
	NetMHCpan-4.1	0.9160	0.8460	0.8740	0.8600	0.7200
	MixMHCpred-2.0.2	0.8850	0.7900	0.8460	0.8180	0.6380
	MHCNetSeq	0.7790	0.6730	0.7620	0.7180	0.4380
HLA-A*69:01	NetMHCpan-4.1	0.9850	0.9680	0.9520	0.9600	0.9210
	HLAB	0.9815	0.9600	0.9231	0.9412	0.8831
	Anthem	0.9750	0.9360	0.9250	0.9300	0.8620
	NetMHCcons-1.1	0.9650	0.9160	0.9120	0.9140	0.8290
	ACME	0.9640	0.9200	0.9160	0.9180	0.8370
	NetMHCstabpan-1.0	0.9590	0.9200	0.9040	0.9120	0.8250
	MixMHCpred-2.0.2	0.9440	0.8800	0.8800	0.8800	0.7620
	MHCNetSeq	0.8980	0.8000	0.9000	0.8500	0.7050
HLA-B*07:02	NetMHCcons-1.1	0.9890	0.9630	0.9620	0.9620	0.9250
	NetMHCstabpan-1.0	0.9890	0.9590	0.9590	0.9590	0.9180
	Anthem	0.9880	0.9590	0.9550	0.9570	0.9140
	NetMHCpan-4.1	0.9880	0.9600	0.9550	0.9570	0.9140
	ACME	0.9880	0.9590	0.9580	0.9590	0.9180
	HLAB	0.9854	0.9720	0.9590	0.9655	0.9311
	MixMHCpred-2.0.2	0.9840	0.9420	0.9390	0.9410	0.8820
	MHCNetSeq	0.9810	0.9320	0.9460	0.9390	0.8780
HLA-B*08:01	ACME	0.9830	0.9800	0.9450	0.9620	0.9260
	NetMHCcons-1.1	0.9760	0.9530	0.9320	0.9420	0.8850
	NetMHCpan-4.1	0.9680	0.9310	0.9100	0.9200	0.8410
	Anthem	0.9650	0.8930	0.9240	0.9080	0.8190
	NetMHCstabpan-1.0	0.9610	0.9190	0.9000	0.9100	0.8200

	HLAB	0.9484	0.9420	0.8571	0.8993	0.8017
	MHCNetSeq	0.9170	0.8550	0.8480	0.8520	0.7040
	MixMHCpred-2.0.2	0.8790	0.8390	0.7770	0.8080	0.6180
HLA-B*13:02	HLAB	0.9870	0.9048	0.9545	0.9302	0.8612
	NetMHCpan-4.1	0.9860	0.9760	0.9430	0.9590	0.9230
	NetMHCcons-1.1	0.9790	0.9330	0.9710	0.9520	0.9060
	NetMHCstabpan-1.0	0.9700	0.9190	0.9470	0.9340	0.8680
	Anthem	0.9660	0.8860	0.9400	0.9130	0.8290
	MixMHCpred-2.0.2	0.9420	0.8910	0.9240	0.9070	0.8160
	MHCNetSeq	0.9220	0.8860	0.8910	0.8880	0.7780
	ACME	0.8820	0.8620	0.8290	0.8450	0.6930
HLA-B*14:02	NetMHCpan-4.1	0.9940	0.9970	0.9840	0.9910	0.9820
	NetMHCstabpan-1.0	0.9900	1.0000	0.9740	0.9870	0.9750
	NetMHCcons-1.1	0.9850	0.9920	0.9540	0.9730	0.9470
	Anthem	0.9720	0.8920	0.9630	0.9280	0.8590
	ACME	0.9680	0.9490	0.9260	0.9370	0.8750
	MixMHCpred-2.0.2	0.9610	0.9100	0.9280	0.9190	0.8390
	HLAB	0.9391	0.8974	0.8250	0.8608	0.7238
	MHCNetSeq	0.8810	0.8740	0.7970	0.8360	0.6760
HLA-B*15:01	Anthem	0.9860	0.9640	0.9430	0.9540	0.9080
	NetMHCpan-4.1	0.9840	0.9600	0.9530	0.9560	0.9130
	NetMHCcons-1.1	0.9830	0.9430	0.9470	0.9450	0.8910
	NetMHCstabpan-1.0	0.9820	0.9440	0.9410	0.9430	0.8850
	MixMHCpred-2.0.2	0.9810	0.9420	0.9330	0.9380	0.8750
	ACME	0.9810	0.9560	0.9400	0.9480	0.8960
	HLAB	0.9808	0.9670	0.9444	0.9557	0.9116
	MHCNetSeq	0.9700	0.9230	0.9340	0.9280	0.8570
HLA-B*18:01	NetMHCpan-4.1	0.9940	1.0000	0.9640	0.9820	0.9650
	NetMHCcons-1.1	0.9940	0.9810	0.9740	0.9770	0.9550
	NetMHCstabpan-1.0	0.9930	0.9900	0.9660	0.9780	0.9570
	ACME	0.9920	0.9860	0.9590	0.9720	0.9460
	HLAB	0.9889	1.0000	0.9070	0.9529	0.9100
	Anthem	0.9860	0.9480	0.9570	0.9520	0.9050
	MixMHCpred-2.0.2	0.9790	0.9260	0.9330	0.9300	0.8610
	MHCNetSeq	0.9690	0.9330	0.9240	0.9290	0.8580
HLA-B*27:01	HLAB	0.9984	1.0000	0.9788	0.9894	0.9790
	MixMHCpred-2.0.2	0.9980	0.9920	0.9800	0.9860	0.9720
	Anthem	0.9960	0.9950	0.9750	0.9850	0.9700
	NetMHCpan-4.1	0.9950	0.9930	0.9790	0.9860	0.9720
	ACME	0.9900	0.9770	0.9570	0.9670	0.9340
	MHCNetSeq	0.9900	0.9950	0.9150	0.9550	0.9120
	NetMHCcons-1.1	0.9870	0.9710	0.9440	0.9580	0.9160
	NetMHCstabpan-1.0	0.9860	0.9730	0.9410	0.9570	0.9140
HLA-B*27:02	HLAB	0.9953	0.9613	0.9945	0.9780	0.9564

	MixMHCpred-2.0.2	0.9950	0.9720	0.9900	0.9810	0.9630
	Anthem	0.9940	0.9620	0.9860	0.9740	0.9490
	NetMHCpan-4.1	0.9930	0.9800	0.9780	0.9790	0.9580
	NetMHCstabpan-1.0	0.9900	0.9670	0.9710	0.9690	0.9380
	ACME	0.9870	0.9720	0.9500	0.9620	0.9230
	MHCNetSeq	0.9870	0.9720	0.9140	0.9430	0.8880
	NetMHCcons-1.1	0.9860	0.9700	0.9550	0.9630	0.9260
HLA-B*27:03	MHCNetSeq	0.9940	0.9740	0.9720	0.9730	0.9470
	HLAB	0.9898	0.9574	0.9792	0.9684	0.9370
	MixMHCpred-2.0.2	0.9820	0.9570	0.9920	0.9750	0.9490
	NetMHCpan-4.1	0.9820	0.9470	0.9640	0.9550	0.9110
	Anthem	0.9770	0.9490	0.9830	0.9660	0.9320
	NetMHCcons-1.1	0.9720	0.9340	0.9640	0.9490	0.8990
	NetMHCstabpan-1.0	0.9720	0.9380	0.9640	0.9510	0.9030
	ACME	0.9710	0.9320	0.9470	0.9400	0.8790
HLA-B*27:04	HLAB	0.9962	0.9167	1.0000	0.9587	0.9204
	NetMHCpan-4.1	0.9850	0.9370	0.9670	0.9520	0.9040
	ACME	0.9830	0.9270	0.9570	0.9420	0.8840
	NetMHCcons-1.1	0.9790	0.9330	0.9750	0.9540	0.9090
	NetMHCstabpan-1.0	0.9780	0.9330	0.9770	0.9550	0.9110
	Anthem	0.9710	0.9130	0.9680	0.9410	0.8830
	MixMHCpred-2.0.2	0.9640	0.9310	0.9800	0.9560	0.9130
	MHCNetSeq	0.9610	0.9330	0.9450	0.9390	0.8790
HLA-B*27:05	HLAB	0.8971	0.8041	0.8371	0.8206	0.6415
	Anthem	0.8650	0.7250	0.8360	0.7800	0.5650
	NetMHCcons-1.1	0.8160	0.6880	0.7820	0.7350	0.4720
	NetMHCstabpan-1.0	0.8160	0.6770	0.7840	0.7310	0.4650
	MixMHCpred-2.0.2	0.8140	0.6950	0.8070	0.7510	0.5050
	NetMHCpan-4.1	0.8070	0.6760	0.7960	0.7360	0.4770
	ACME	0.7910	0.6550	0.8270	0.7410	0.4890
	MHCNetSeq	0.7840	0.6650	0.8070	0.7360	0.4780
HLA-B*27:06	MHCNetSeq	0.9940	0.9800	0.9300	0.9550	0.9120
	HLAB	0.9902	0.9600	0.9412	0.9505	0.9012
	MixMHCpred-2.0.2	0.9900	0.9640	0.9760	0.9700	0.9400
	NetMHCpan-4.1	0.9850	0.9320	0.9480	0.9400	0.8800
	ACME	0.9800	0.9300	0.9380	0.9340	0.8690
	Anthem	0.9760	0.9320	0.9870	0.9590	0.9210
	NetMHCcons-1.1	0.9690	0.9040	0.9320	0.9180	0.8370
	NetMHCstabpan-1.0	0.9690	0.9080	0.9380	0.9230	0.8470
HLA-B*27:07	HLAB	0.9989	1.0000	0.9905	0.9952	0.9905
	MixMHCpred-2.0.2	0.9980	0.9870	0.9870	0.9880	0.9750
	Anthem	0.9960	0.9690	0.9860	0.9780	0.9560
	NetMHCpan-4.1	0.9940	0.9880	0.9770	0.9830	0.9660
	MHCNetSeq	0.9940	1.0000	0.9550	0.9770	0.9560

	ACME	0.9920	0.9860	0.9750	0.9800	0.9610
	NetMHCstabpan-1.00	0.9890	0.9820	0.9650	0.9740	0.9480
	NetMHCcons-1.1	0.9870	0.9880	0.9510	0.9700	0.9400
HLA-B*27:08	HLAB	0.9993	1.0000	0.9626	0.9812	0.9631
	MixMHCpred-2.0.2	0.9990	0.9930	0.9880	0.9900	0.9800
	Anthem	0.9950	0.9760	0.9820	0.9790	0.9570
	NetMHCstabpan-1.00	0.9950	0.9880	0.9720	0.9800	0.9600
	NetMHCpan-4.1	0.9930	0.9750	0.9670	0.9710	0.9430
	NetMHCcons-1.1	0.9930	0.9780	0.9690	0.9730	0.9470
	ACME	0.9900	0.9820	0.9590	0.9700	0.9410
HLA-B*27:09	Anthem	0.9690	0.8870	0.9400	0.9140	0.8290
	NetMHCpan-4.1	0.9550	0.8870	0.9260	0.9070	0.8150
	MixMHCpred-2.0.2	0.9530	0.8710	0.9400	0.9060	0.8140
	HLAB	0.9512	0.9682	0.9050	0.9365	0.8748
	NetMHCcons-1.1	0.9480	0.8640	0.9220	0.8930	0.7870
	NetMHCstabpan-1.00	0.9480	0.8610	0.9270	0.8940	0.7900
	MHCNetSeq	0.9480	0.8800	0.9180	0.8990	0.7990
	ACME	0.9400	0.8630	0.9290	0.8950	0.7930
HLA-B*35:01	Anthem	0.9690	0.9290	0.9310	0.9300	0.8610
	NetMHCpan-4.1	0.9690	0.9320	0.9560	0.9440	0.8880
	NetMHCcons-1.1	0.9640	0.9220	0.9390	0.9310	0.8610
	NetMHCstabpan-1.00	0.9640	0.9170	0.9350	0.9260	0.8520
	HLAB	0.9636	0.9355	0.9214	0.9284	0.8570
	ACME	0.9630	0.9270	0.9400	0.9330	0.8670
	MixMHCpred-2.0.2	0.9610	0.9180	0.9250	0.9210	0.8430
	MHCNetSeq	0.9190	0.8160	0.8670	0.8420	0.6850
HLA-B*35:03	NetMHCpan-4.1	0.9970	0.9980	0.9860	0.9920	0.9840
	ACME	0.9870	0.9610	0.9470	0.9540	0.9090
	HLAB	0.9833	0.9592	0.9600	0.9596	0.9192
	Anthem	0.9780	0.9220	0.9520	0.9370	0.8750
	NetMHCcons-1.1	0.9770	0.9040	0.9680	0.9360	0.8740
	NetMHCstabpan-1.00	0.9740	0.9020	0.9530	0.9280	0.8570
	MixMHCpred-2.0.2	0.9670	0.9350	0.9530	0.9440	0.8880
	MHCNetSeq	0.9290	0.8350	0.9200	0.8780	0.7590
HLA-B*35:08	HLAB	0.9919	0.9565	1.0000	0.9785	0.9579
	NetMHCpan-4.1	0.9760	0.9570	0.9800	0.9680	0.9370
	ACME	0.9690	0.9260	0.9630	0.9450	0.8900
	Anthem	0.9630	0.9130	0.9490	0.9310	0.8640
	NetMHCcons-1.1	0.9630	0.9170	0.9370	0.9270	0.8550
	NetMHCstabpan-1.00	0.9630	0.9130	0.9390	0.9260	0.8530
	MixMHCpred-2.0.2	0.9460	0.8720	0.9040	0.8880	0.7770
	MHCNetSeq	0.9390	0.8850	0.8910	0.8880	0.7770
HLA-B*37:01	HLAB	0.9983	0.9259	0.9878	0.9571	0.9158
	NetMHCpan-4.1	0.9930	0.9960	0.9790	0.9880	0.9760

	NetMHCcons-1.1	0.9900	0.9730	0.9730	0.9730	0.9460
	NetMHCstabpan-1.0	0.9890	0.9800	0.9770	0.9780	0.9570
	Anthem	0.9860	0.9530	0.9560	0.9550	0.9100
	ACME	0.9840	0.9620	0.9720	0.9670	0.9330
	MixMHCpred-2.0.2	0.9300	0.9060	0.8470	0.8770	0.7550
	MHCNetSeq	0.9230	0.8560	0.8780	0.8670	0.7340
HLA-B*39:01	HLAB	0.9998	1.0000	0.9808	0.9903	0.9808
	NetMHCcons-1.1	0.9980	0.9880	0.9710	0.9790	0.9590
	NetMHCstabpan-1.0	0.9980	0.9880	0.9760	0.9820	0.9650
	Anthem	0.9970	0.9650	0.9740	0.9690	0.9390
	MixMHCpred-2.0.2	0.9970	0.9730	0.9860	0.9790	0.9600
	NetMHCpan-4.1	0.9970	0.9820	0.9940	0.9880	0.9770
	ACME	0.9970	0.9800	0.9740	0.9780	0.9550
	MHCNetSeq	0.9970	0.9800	0.9820	0.9810	0.9630
HLA-B*40:01	NetMHCcons-1.1	0.9950	0.9720	0.9780	0.9750	0.9510
	ACME	0.9950	0.9880	0.9680	0.9780	0.9560
	Anthem	0.9940	0.9590	0.9680	0.9640	0.9270
	HLAB	0.9937	0.9690	0.9604	0.9647	0.9294
	NetMHCpan-4.1	0.9930	0.9680	0.9710	0.9690	0.9390
	NetMHCstabpan-1.0	0.9920	0.9660	0.9760	0.9710	0.9420
	MixMHCpred-2.0.2	0.9850	0.9560	0.9470	0.9510	0.9030
	MHCNetSeq	0.9810	0.9420	0.9630	0.9530	0.9060
HLA-B*40:02	MixMHCpred-2.0.2	0.9920	0.9640	0.9630	0.9630	0.9260
	Anthem	0.9910	0.9700	0.9670	0.9690	0.9380
	NetMHCcons-1.1	0.9910	0.9700	0.9730	0.9710	0.9430
	NetMHCpan-4.1	0.9900	0.9840	0.9640	0.9740	0.9480
	NetMHCstabpan-1.0	0.9890	0.9670	0.9640	0.9660	0.9320
	ACME	0.9890	0.9670	0.9590	0.9630	0.9260
	HLAB	0.9886	0.9780	0.9643	0.9711	0.9423
	MHCNetSeq	0.9680	0.9150	0.9200	0.9170	0.8350
HLA-B*41:01	ACME	0.9940	0.9630	0.9810	0.9720	0.9450
	HLAB	0.9926	0.9375	1.0000	0.9697	0.9410
	NetMHCpan-4.1	0.9900	0.9440	0.9810	0.9630	0.9260
	NetMHCstabpan-1.0	0.9830	0.9380	0.9880	0.9630	0.9260
	MixMHCpred-2.0.2	0.9820	0.9250	0.9750	0.9500	0.9020
	NetMHCcons-1.1	0.9770	0.9380	0.9810	0.9600	0.9200
	MHCNetSeq	0.9690	0.9500	0.9380	0.9440	0.8890
	Anthem	0.9290	0.8620	0.9910	0.9270	0.8610
HLA-B*44:02	NetMHCpan-4.1	0.9930	0.9760	0.9670	0.9710	0.9420
	Anthem	0.9880	0.9550	0.9460	0.9500	0.9010
	NetMHCcons-1.1	0.9880	0.9370	0.9570	0.9470	0.8940
	ACME	0.9850	0.9460	0.9540	0.9500	0.9010
	HLAB	0.9848	0.9539	0.9540	0.9539	0.9079
	NetMHCstabpan-1.0	0.9840	0.9220	0.9610	0.9420	0.8840

	MixMHCpred-2.0.2	0.9830	0.9300	0.9320	0.9310	0.8630
	MHCNetSeq	0.9630	0.8990	0.9260	0.9120	0.8250
HLA-B*44:03	NetMHCpan-4.1	0.9940	0.9780	0.9760	0.9770	0.9540
	NetMHCcons-1.1	0.9940	0.9800	0.9700	0.9750	0.9500
	ACME	0.9940	0.9800	0.9710	0.9760	0.9510
	HLAB	0.9922	0.9808	0.9753	0.9781	0.9561
	Anthem	0.9910	0.9590	0.9640	0.9610	0.9230
	NetMHCstabpan-1.0	0.9910	0.9720	0.9560	0.9640	0.9280
	MixMHCpred-2.0.2	0.9900	0.9540	0.9450	0.9500	0.9000
	MHCNetSeq	0.9800	0.9460	0.9600	0.9530	0.9060
HLA-B*44:27	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9990	1.0000	0.9930	0.9960	0.9930
	NetMHCstabpan-1.0	0.9990	1.0000	0.9930	0.9960	0.9930
	NetMHCcons-1.1	0.9980	0.9930	0.9930	0.9930	0.9860
	MHCNetSeq	0.9980	0.9860	0.9930	0.9890	0.9790
	ACME	0.9970	0.9860	0.9860	0.9860	0.9720
	NetMHCpan-4.1	0.9920	1.0000	0.9860	0.9930	0.9870
	Anthem	0.9780	0.8860	0.9830	0.9350	0.8750
HLA-B*45:01	HLAB	0.9803	0.9444	0.8624	0.9032	0.8093
	Anthem	0.9710	0.9110	0.9320	0.9210	0.8440
	NetMHCpan-4.1	0.9660	0.9340	0.9500	0.9420	0.8850
	NetMHCcons-1.1	0.9660	0.9090	0.9460	0.9280	0.8570
	NetMHCstabpan-1.0	0.9590	0.9110	0.9520	0.9310	0.8640
	ACME	0.9590	0.9190	0.9350	0.9270	0.8550
	MixMHCpred-2.0.2	0.9240	0.8610	0.8350	0.8480	0.6980
	MHCNetSeq	0.8350	0.7410	0.8240	0.7830	0.5690
HLA-B*46:01	MHCNetSeq	0.9780	0.9460	0.9410	0.9430	0.8870
	Anthem	0.9710	0.9340	0.9650	0.9500	0.9000
	MixMHCpred-2.0.2	0.9660	0.9460	0.9810	0.9630	0.9270
	HLAB	0.9578	0.7763	0.9481	0.8627	0.7359
	NetMHCstabpan-1.0	0.9460	0.9080	0.9210	0.9140	0.8290
	NetMHCpan-4.1	0.9450	0.9150	0.9180	0.9160	0.8330
	NetMHCcons-1.1	0.9450	0.9030	0.9180	0.9110	0.8220
	ACME	0.9270	0.8510	0.8640	0.8580	0.7170
HLA-B*49:01	NetMHCpan-4.1	0.9950	0.9950	0.9740	0.9850	0.9690
	Anthem	0.9860	0.9390	0.9630	0.9500	0.9020
	NetMHCcons-1.1	0.9840	0.9530	0.9740	0.9640	0.9270
	ACME	0.9840	0.9630	0.9640	0.9640	0.9270
	NetMHCstabpan-1.0	0.9830	0.9530	0.9640	0.9580	0.9170
	HLAB	0.9792	0.9813	0.9444	0.9628	0.9262
	MixMHCpred-2.0.2	0.9670	0.9060	0.9420	0.9240	0.8490
	MHCNetSeq	0.9420	0.9270	0.8700	0.8990	0.7990
HLA-B*50:01	NetMHCpan-4.1	0.9850	0.9750	0.9470	0.9600	0.9220
	NetMHCstabpan-1.0	0.9810	0.9630	0.9580	0.9600	0.9210

	NetMHCcons-1.1	0.9800	0.9610	0.9530	0.9570	0.9140
	HLAB	0.9797	0.9535	0.9545	0.9540	0.9080
	Anthem	0.9750	0.8840	0.9500	0.9170	0.8360
	MixMHCpred-2.0.2	0.9700	0.9160	0.9280	0.9220	0.8450
	ACME	0.9680	0.9440	0.9350	0.9390	0.8790
	MHCNetSeq	0.9560	0.9020	0.8950	0.8990	0.7990
HLA-B*51:01	HLAB	0.9683	0.9024	0.9636	0.9331	0.8678
	Anthem	0.9380	0.8260	0.9180	0.8720	0.7470
	NetMHCcons-1.1	0.8700	0.7900	0.7540	0.7720	0.5450
	NetMHCpan-4.1	0.8690	0.7790	0.7810	0.7800	0.5630
	NetMHCstabpan-1.0	0.8650	0.7860	0.7490	0.7670	0.5360
	MixMHCpred-2.0.2	0.8230	0.6850	0.8290	0.7570	0.5190
	ACME	0.7920	0.6650	0.8100	0.7380	0.4810
	MHCNetSeq	0.7460	0.6850	0.7150	0.7000	0.4020
HLA-B*53:01	MixMHCpred-2.0.2	0.9940	1.0000	0.9780	0.9890	0.9780
	NetMHCcons-1.1	0.9860	0.9740	0.9490	0.9620	0.9240
	Anthem	0.9830	0.8950	0.9720	0.9340	0.8700
	NetMHCpan-4.1	0.9810	0.9560	0.9390	0.9480	0.8960
	NetMHCstabpan-1.0	0.9770	0.9340	0.9290	0.9310	0.8630
	HLAB	0.9675	0.8983	0.9667	0.9328	0.8674
	ACME	0.9610	0.9080	0.9420	0.9260	0.8520
	MHCNetSeq	0.7610	0.6860	0.7320	0.7090	0.4200
HLA-B*54:01	HLAB	0.9729	0.9242	0.9552	0.9398	0.8801
	ACME	0.9560	0.9120	0.9400	0.9260	0.8520
	NetMHCstabpan-1.0	0.9470	0.9290	0.9150	0.9220	0.8450
	NetMHCcons-1.1	0.9440	0.9250	0.9200	0.9230	0.8460
	Anthem	0.9430	0.8240	0.9540	0.8890	0.7860
	NetMHCpan-4.1	0.9390	0.8880	0.9080	0.8980	0.7960
	MixMHCpred-2.0.2	0.9320	0.8650	0.9000	0.8830	0.7660
	MHCNetSeq	0.7350	0.7060	0.7530	0.7300	0.4610
HLA-B*56:01	HLAB	1.0000	0.8333	1.0000	0.9178	0.8468
	MixMHCpred-2.0.2	0.9990	1.0000	0.9860	0.9930	0.9870
	NetMHCpan-4.1	0.9990	0.9970	0.9920	0.9940	0.9890
	NetMHCcons-1.1	0.9990	1.0000	0.9890	0.9940	0.9890
	NetMHCstabpan-1.0	0.9990	1.0000	0.9940	0.9970	0.9950
	ACME	0.9970	1.0000	0.9860	0.9930	0.9870
	Anthem	0.9950	0.9940	0.9790	0.9870	0.9740
	MHCNetSeq	0.9870	0.9690	0.9640	0.9660	0.9330
HLA-B*57:01	Anthem	0.9650	0.8810	0.9620	0.9210	0.8460
	NetMHCcons-1.1	0.9630	0.8940	0.9490	0.9220	0.8440
	NetMHCstabpan-1.0	0.9630	0.8880	0.9520	0.9200	0.8410
	MixMHCpred-2.0.2	0.9590	0.8920	0.9520	0.9220	0.8450
	MHCNetSeq	0.9590	0.9080	0.9380	0.9240	0.8470
	NetMHCpan-4.1	0.9580	0.8930	0.9360	0.9150	0.8300

	HLAB	0.9578	0.9350	0.9026	0.9188	0.8380
	ACME	0.9470	0.8870	0.9340	0.9110	0.8220
HLA-B*57:03	NetMHCpan-4.1	0.9840	0.9460	0.9560	0.9510	0.9020
	NetMHCcons-1.1	0.9820	0.9420	0.9660	0.9540	0.9090
	NetMHCstabpan-1.0	0.9820	0.9440	0.9660	0.9550	0.9100
	Anthem	0.9780	0.9450	0.9710	0.9580	0.9160
	MHCNetSeq	0.9740	0.9270	0.9540	0.9400	0.8810
	HLAB	0.9652	0.8848	0.9541	0.9195	0.8411
	ACME	0.9650	0.9110	0.9330	0.9220	0.8450
HLA-B*58:01	NetMHCcons-1.1	0.9760	0.9440	0.9160	0.9300	0.8610
	NetMHCpan-4.1	0.9710	0.9160	0.9290	0.9230	0.8460
	Anthem	0.9700	0.9010	0.9290	0.9150	0.8310
	NetMHCstabpan-1.0	0.9650	0.8950	0.9180	0.9060	0.8130
	ACME	0.9650	0.9010	0.9360	0.9190	0.8380
	HLAB	0.9572	0.8990	0.9296	0.9144	0.8291
	MixMHCpred-2.0.2	0.9410	0.8690	0.9210	0.8950	0.7910
	MHCNetSeq	0.9090	0.8480	0.9520	0.9000	0.8040
HLA-C*01:02	NetMHCstabpan-1.0	0.9820	0.9510	0.9760	0.9640	0.9270
	Anthem	0.9780	0.9220	0.9160	0.9190	0.8380
	NetMHCpan-4.1	0.9770	0.9520	0.9540	0.9530	0.9060
	NetMHCcons-1.1	0.9720	0.9470	0.9490	0.9480	0.8960
	MixMHCpred-2.0.2	0.9650	0.8970	0.9030	0.9000	0.8010
	HLAB	0.9506	0.9634	0.8554	0.9091	0.8232
	MHCNetSeq	0.8440	0.7500	0.7820	0.7660	0.5330
HLA-C*02:02	NetMHCpan-4.1	0.9860	0.9640	0.9530	0.9590	0.9180
	Anthem	0.9820	0.9300	0.9320	0.9310	0.8630
	NetMHCstabpan-1.0	0.9810	0.9230	0.9430	0.9330	0.8670
	NetMHCcons-1.1	0.9760	0.9220	0.9360	0.9290	0.8590
	HLAB	0.9679	0.9268	0.9032	0.9150	0.8302
	MixMHCpred-2.0.2	0.9660	0.9110	0.9110	0.9110	0.8220
	MHCNetSeq	0.8640	0.7890	0.7810	0.7850	0.5720
HLA-C*03:03	HLAB	0.9435	0.9014	0.9722	0.9371	0.8762
	NetMHCpan-4.1	0.9360	0.8760	0.9750	0.9260	0.8550
	Anthem	0.9290	0.8370	0.9380	0.8870	0.7790
	MixMHCpred-2.0.2	0.9280	0.8760	0.9180	0.8970	0.7950
	NetMHCstabpan-1.0	0.9250	0.8600	0.9450	0.9020	0.8090
	NetMHCcons-1.1	0.9230	0.8670	0.9240	0.8950	0.7940
	MHCNetSeq	0.8770	0.8030	0.8140	0.8090	0.6170
HLA-C*03:04	NetMHCpan-4.1	0.9840	0.9400	0.9430	0.9410	0.8830
	NetMHCcons-1.1	0.9830	0.9440	0.9440	0.9440	0.8880
	NetMHCstabpan-1.0	0.9830	0.9420	0.9430	0.9430	0.8860
	HLAB	0.9827	0.8902	0.9639	0.9273	0.8567
	MixMHCpred-2.0.2	0.9790	0.9470	0.9390	0.9430	0.8870
	Anthem	0.9760	0.8970	0.9690	0.9330	0.8690

	MHCNetSeq	0.8970	0.8440	0.8020	0.8230	0.6490
HLA-C*04:01	HLAB	0.9598	0.7619	0.9914	0.8769	0.7742
	Anthem	0.9530	0.8390	0.9420	0.8910	0.7860
	NetMHCpan-4.1	0.9250	0.8660	0.9150	0.8900	0.7820
	NetMHCcons-1.1	0.9160	0.8450	0.8880	0.8660	0.7340
	NetMHCstabpan-1.0	0.9160	0.8390	0.8820	0.8600	0.7220
	MixMHCpred-2.0.2	0.9110	0.8330	0.8970	0.8650	0.7320
	MHCNetSeq	0.6780	0.5820	0.7100	0.6460	0.2950
HLA-C*05:01	HLAB	0.9771	0.8983	0.9832	0.9409	0.8850
	Anthem	0.9680	0.8640	0.9560	0.9100	0.8240
	NetMHCcons-1.1	0.9670	0.9360	0.9540	0.9450	0.8890
	NetMHCpan-4.1	0.9660	0.9310	0.9450	0.9380	0.8760
	NetMHCstabpan-1.0	0.9650	0.9350	0.9510	0.9430	0.8860
	MixMHCpred-2.0.2	0.9600	0.9220	0.9030	0.9130	0.8260
	MHCNetSeq	0.8860	0.8640	0.7530	0.8080	0.6210
HLA-C*06:02	HLAB	0.9427	0.9072	0.8878	0.8974	0.7951
	Anthem	0.9250	0.7920	0.9250	0.8580	0.7240
	NetMHCpan-4.1	0.9170	0.8330	0.9300	0.8810	0.7670
	NetMHCstabpan-1.0	0.9150	0.8310	0.8980	0.8640	0.7320
	MixMHCpred-2.0.2	0.9050	0.8330	0.8620	0.8470	0.6960
	NetMHCcons-1.1	0.9050	0.8380	0.8760	0.8570	0.7160
	MHCNetSeq	0.7900	0.7020	0.7760	0.7390	0.4820
HLA-C*07:01	NetMHCpan-4.1	0.9870	0.9540	0.9540	0.9540	0.9080
	HLAB	0.9849	0.9750	0.9506	0.9627	0.9258
	Anthem	0.9780	0.9000	0.9400	0.9200	0.8410
	NetMHCstabpan-1.0	0.9720	0.9140	0.9120	0.9130	0.8270
	NetMHCcons-1.1	0.9600	0.9330	0.8700	0.9010	0.8050
	MixMHCpred-2.0.2	0.8720	0.8280	0.8060	0.8170	0.6340
	MHCNetSeq	0.8610	0.7730	0.8300	0.8010	0.6040
HLA-C*07:02	NetMHCpan-4.1	0.9750	0.9200	0.9440	0.9320	0.8650
	HLAB	0.9698	0.8909	0.9464	0.9189	0.8390
	Anthem	0.9510	0.8580	0.9120	0.8850	0.7730
	NetMHCstabpan-1.0	0.9490	0.8840	0.9000	0.8920	0.7840
	NetMHCcons-1.1	0.9460	0.9250	0.8560	0.8910	0.7840
	MixMHCpred-2.0.2	0.9160	0.8620	0.8290	0.8450	0.6930
	MHCNetSeq	0.8700	0.8120	0.8130	0.8130	0.6260
HLA-C*07:04	NetMHCpan-4.1	0.9960	1.0000	0.9780	0.9890	0.9790
	NetMHCstabpan-1.0	0.9880	0.9850	0.9570	0.9700	0.9410
	Anthem	0.9850	0.9320	0.9450	0.9380	0.8770
	NetMHCcons-1.1	0.9710	0.9500	0.9310	0.9410	0.8820
	HLAB	0.9583	0.9688	0.8485	0.9077	0.8219
	MHCNetSeq	0.5630	0.5060	0.6880	0.5970	0.2030
HLA-C*08:02	NetMHCpan-4.1	0.9890	0.9870	0.9690	0.9780	0.9560
	HLAB	0.9885	0.9732	0.9381	0.9556	0.9117

		Anthem	0.9870	0.9710	0.9540	0.9630	0.9260
		NetMHCstabpan-1.0	0.9850	0.9430	0.9490	0.9460	0.8920
		NetMHCcons-1.1	0.9830	0.9400	0.9540	0.9470	0.8950
		MixMHCpred-2.0.2	0.9690	0.9060	0.9270	0.9160	0.8330
		MHCNetSeq	0.9200	0.8400	0.8700	0.8550	0.7110
	HLA-C*14:02	MixMHCpred-2.0.2	0.9970	0.9840	0.9870	0.9860	0.9720
		NetMHCpan-4.1	0.9970	0.9950	0.9830	0.9890	0.9780
		NetMHCcons-1.1	0.9950	0.9910	0.9760	0.9840	0.9670
		NetMHCstabpan-1.0	0.9940	0.9860	0.9690	0.9770	0.9550
		Anthem	0.9900	0.9780	0.9770	0.9780	0.9550
		HLAB	0.9899	0.9531	0.9846	0.9690	0.9384
		MHCNetSeq	0.6690	0.6710	0.6220	0.6460	0.2930
	HLA-C*16:01	NetMHCpan-4.1	0.9740	0.9420	0.9220	0.9320	0.8640
		NetMHCcons-1.1	0.9710	0.9460	0.9050	0.9250	0.8520
		NetMHCstabpan-1.0	0.9710	0.9570	0.8980	0.9270	0.8560
		Anthem	0.9610	0.7910	0.9370	0.8640	0.7390
		MixMHCpred-2.0.2	0.9530	0.8980	0.8800	0.8890	0.7800
		HLAB	0.9431	0.9348	0.8511	0.8925	0.7880
		MHCNetSeq	0.7520	0.8220	0.6150	0.7190	0.4530
11	HLA-A*01:01	Anthem	0.9920	0.9570	0.9540	0.9550	0.9110
		NetMHCpan-4.1	0.9920	0.9650	0.9590	0.9620	0.9240
		MixMHCpred-2.0.2	0.9910	0.9540	0.9530	0.9540	0.9070
		HLAB	0.9864	0.9177	0.9655	0.9417	0.8844
		NetMHCcons-1.1	0.9850	0.9280	0.9450	0.9360	0.8730
		NetMHCstabpan-1.0	0.9840	0.9260	0.9410	0.9340	0.8670
		ACME	0.9830	0.9300	0.9440	0.9370	0.8740
		MHCNetSeq	0.9460	0.8960	0.8720	0.8840	0.7680
	HLA-A*02:01	Anthem	0.9500	0.8800	0.8900	0.8850	0.7710
		HLAB	0.9317	0.9044	0.8887	0.8965	0.7931
		MixMHCpred-2.0.2	0.9310	0.8720	0.8600	0.8660	0.7320
		NetMHCcons-1.1	0.9300	0.8550	0.9210	0.8870	0.7770
		NetMHCstabpan-1.0	0.9270	0.8520	0.9130	0.8820	0.7670
		ACME	0.9250	0.8620	0.8820	0.8720	0.7440
		NetMHCpan-4.1	0.9210	0.8630	0.8900	0.8760	0.7530
		MHCNetSeq	0.8930	0.8070	0.8390	0.8230	0.6460
	HLA-A*02:03	HLAB	0.9288	0.8462	0.9259	0.8868	0.7754
		NetMHCpan-4.1	0.9210	0.8850	0.9150	0.9000	0.8010
		ACME	0.9120	0.8850	0.8850	0.8850	0.7700
		NetMHCcons-1.1	0.9060	0.8730	0.8310	0.8520	0.7110
		NetMHCstabpan-1.0	0.8700	0.7690	0.8660	0.8170	0.6400
		Anthem	0.8680	0.7850	0.9040	0.8440	0.6960
		MixMHCpred-2.0.2	0.8430	0.7880	0.8430	0.8150	0.6320
		MHCNetSeq	0.8110	0.7540	0.8460	0.8000	0.6040
	HLA-A*02:04	HLAB	0.9891	0.9655	0.9667	0.9661	0.9322

	MixMHCpred-2.0.2	0.9810	0.9140	0.9660	0.9400	0.8810
	ACME	0.9650	0.9180	0.9310	0.9240	0.8490
	NetMHCpan-4.1	0.9540	0.9040	0.9250	0.9140	0.8290
	NetMHCstabpan-1.0	0.9520	0.9140	0.9420	0.9280	0.8570
	MHCNetSeq	0.9520	0.9110	0.9350	0.9230	0.8460
	NetMHCcons-1.1	0.9500	0.9070	0.9380	0.9230	0.8470
	Anthem	0.9300	0.7860	0.9740	0.8800	0.7740
HLA-A*02:05	MHCNetSeq	0.9850	0.9710	0.9230	0.9470	0.8970
	NetMHCpan-4.1	0.9840	0.9760	0.9530	0.9650	0.9320
	NetMHCcons-1.1	0.9840	1.0000	0.9590	0.9790	0.9620
	NetMHCstabpan-1.0	0.9830	0.9760	0.9710	0.9740	0.9490
	ACME	0.9830	0.9820	0.9530	0.9680	0.9370
	HLAB	0.9804	0.9412	0.9444	0.9429	0.8856
	Anthem	0.9620	0.8940	0.9550	0.9250	0.8530
	MixMHCpred-2.0.2	0.9540	0.8820	0.9060	0.8940	0.7900
HLA-A*02:07	NetMHCpan-4.1	0.9600	0.9000	0.9540	0.9270	0.8550
	MixMHCpred-2.0.2	0.9580	0.9070	0.9740	0.9400	0.8820
	HLAB	0.9564	0.8947	0.9481	0.9216	0.8442
	MHCNetSeq	0.9530	0.9130	0.9140	0.9140	0.8280
	Anthem	0.9480	0.8870	0.9710	0.9290	0.8620
	NetMHCcons-1.1	0.9400	0.8960	0.9120	0.9040	0.8080
	NetMHCstabpan-1.0	0.9370	0.8910	0.9110	0.9010	0.8020
	ACME	0.9150	0.8800	0.8650	0.8720	0.7460
HLA-A*03:01	NetMHCpan-4.1	0.9820	0.9590	0.9630	0.9610	0.9210
	NetMHCcons-1.1	0.9780	0.9460	0.9670	0.9570	0.9130
	NetMHCstabpan-1.0	0.9770	0.9550	0.9550	0.9550	0.9100
	Anthem	0.9760	0.9570	0.9380	0.9470	0.8950
	ACME	0.9750	0.9430	0.9410	0.9420	0.8840
	HLAB	0.9733	0.9455	0.9578	0.9517	0.9034
	MixMHCpred-2.0.2	0.9690	0.9280	0.9320	0.9300	0.8610
	MHCNetSeq	0.9260	0.8480	0.9190	0.8840	0.7700
HLA-A*11:01	HLAB	0.9800	0.9571	0.9786	0.9679	0.9360
	NetMHCpan-4.1	0.9780	0.9550	0.9630	0.9590	0.9180
	NetMHCcons-1.1	0.9760	0.9480	0.9680	0.9580	0.9170
	NetMHCstabpan-1.0	0.9760	0.9450	0.9700	0.9580	0.9160
	Anthem	0.9750	0.9500	0.9550	0.9520	0.9050
	MixMHCpred-2.0.2	0.9730	0.9340	0.9420	0.9380	0.8770
	ACME	0.9730	0.9550	0.9570	0.9560	0.9130
	MHCNetSeq	0.9590	0.9140	0.9280	0.9210	0.8430
HLA-A*23:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9990	0.9850	1.0000	0.9920	0.9850
	NetMHCpan-4.1	0.9990	1.0000	0.9960	0.9980	0.9960
	ACME	0.9990	1.0000	0.9890	0.9940	0.9890
	NetMHCcons-1.1	0.9970	0.9850	0.9810	0.9830	0.9660

	NetMHCstabpan-1.0	0.9970	1.0000	0.9730	0.9870	0.9740
	Anthem	0.9910	0.9540	0.9910	0.9720	0.9460
	MHCNetSeq	0.9910	0.9540	0.9730	0.9640	0.9280
HLA-A*24:02	HLAB	0.9947	0.9677	0.9733	0.9705	0.9410
	Anthem	0.9900	0.9380	0.9620	0.9500	0.9000
	NetMHCpan-4.1	0.9900	0.9700	0.9550	0.9630	0.9250
	NetMHCstabpan-1.0	0.9900	0.9710	0.9560	0.9640	0.9280
	NetMHCcons-1.1	0.9890	0.9740	0.9530	0.9640	0.9280
	MixMHCpred-2.0.2	0.9850	0.9490	0.9320	0.9400	0.8810
	ACME	0.9850	0.9450	0.9600	0.9530	0.9060
	MHCNetSeq	0.9550	0.8930	0.9000	0.8970	0.7940
HLA-A*24:06	HLAB	0.9395	0.8421	0.9500	0.8974	0.7984
	NetMHCpan-4.1	0.9380	0.8900	0.9530	0.9210	0.8450
	MixMHCpred-2.0.2	0.9360	0.8950	0.9730	0.9340	0.8710
	NetMHCstabpan-1.0	0.9330	0.8790	0.9160	0.8970	0.7970
	NetMHCcons-1.1	0.9320	0.8630	0.9370	0.9000	0.8040
	Anthem	0.9180	0.8100	0.9430	0.8770	0.7630
	MHCNetSeq	0.9120	0.8950	0.8530	0.8740	0.7490
HLA-A*29:02	HLAB	0.9823	0.9574	0.9579	0.9577	0.9153
	MixMHCpred-2.0.2	0.9790	0.9400	0.9780	0.9590	0.9190
	Anthem	0.9730	0.9190	0.9580	0.9390	0.8780
	NetMHCcons-1.1	0.9730	0.9390	0.9600	0.9500	0.9000
	NetMHCpan-4.1	0.9720	0.9460	0.9550	0.9500	0.9010
	NetMHCstabpan-1.0	0.9700	0.9350	0.9550	0.9450	0.8910
	ACME	0.9680	0.9420	0.9470	0.9440	0.8880
	MHCNetSeq	0.9450	0.8940	0.8900	0.8920	0.7830
HLA-A*31:01	MixMHCpred-2.0.2	0.9860	0.9500	0.9480	0.9490	0.8990
	Anthem	0.9840	0.9670	0.9140	0.9400	0.8820
	NetMHCstabpan-1.0	0.9810	0.9580	0.9260	0.9420	0.8840
	NetMHCcons-1.1	0.9780	0.9410	0.9410	0.9410	0.8820
	NetMHCpan-4.1	0.9740	0.9380	0.9320	0.9350	0.8700
	ACME	0.9670	0.9110	0.9320	0.9210	0.8430
	HLAB	0.9664	0.9545	0.8955	0.9248	0.8512
	MHCNetSeq	0.9310	0.8580	0.8860	0.8720	0.7450
HLA-A*32:01	NetMHCstabpan-1.0	0.9890	0.9600	0.9680	0.9640	0.9280
	NetMHCcons-1.1	0.9870	0.9620	0.9540	0.9580	0.9160
	MixMHCpred-2.0.2	0.9850	0.9320	0.9780	0.9550	0.9110
	NetMHCpan-4.1	0.9820	0.9380	0.9740	0.9560	0.9130
	ACME	0.9760	0.9440	0.9640	0.9540	0.9090
	HLAB	0.9745	0.9200	0.9804	0.9505	0.9025
	Anthem	0.9530	0.8640	0.9700	0.9170	0.8400
	MHCNetSeq	0.9500	0.9080	0.9260	0.9170	0.8350
HLA-A*68:01	NetMHCstabpan-1.0	0.9990	0.9980	0.9890	0.9930	0.9870
	HLAB	0.9987	1.0000	0.9455	0.9725	0.9464

	NetMHCpan-4.1	0.9980	0.9960	0.9940	0.9950	0.9910
	NetMHCcons-1.1	0.9980	0.9920	0.9890	0.9910	0.9820
	ACME	0.9960	0.9940	0.9780	0.9860	0.9730
	Anthem	0.9950	0.9850	0.9740	0.9800	0.9600
	MixMHCpred-2.0.2	0.9940	0.9910	0.9540	0.9720	0.9460
	MHCNetSeq	0.9130	0.8670	0.8280	0.8470	0.6950
HLA-A*68:02	HLAB	0.9274	0.8714	0.8592	0.8652	0.7306
	Anthem	0.8890	0.8000	0.8290	0.8150	0.6300
	MHCNetSeq	0.8800	0.8070	0.7800	0.7940	0.5910
	MixMHCpred-2.0.2	0.8720	0.7400	0.8860	0.8130	0.6340
	NetMHCstabpan-1.0	0.8510	0.7560	0.8690	0.8120	0.6300
	NetMHCcons-1.1	0.8390	0.7420	0.8670	0.8040	0.6140
	ACME	0.8290	0.7200	0.8600	0.7900	0.5880
	NetMHCpan-4.1	0.8220	0.7220	0.8640	0.7930	0.5930
HLA-B*07:02	NetMHCpan-4.1	0.9840	0.9540	0.9520	0.9530	0.9060
	NetMHCcons-1.1	0.9840	0.9580	0.9620	0.9590	0.9190
	NetMHCstabpan-1.0	0.9840	0.9540	0.9600	0.9570	0.9140
	HLAB	0.9830	0.9375	0.9707	0.9541	0.9087
	MixMHCpred-2.0.2	0.9820	0.9490	0.9460	0.9470	0.8940
	ACME	0.9820	0.9650	0.9510	0.9580	0.9160
	Anthem	0.9810	0.9510	0.9550	0.9530	0.9070
	MHCNetSeq	0.9530	0.8740	0.8980	0.8860	0.7730
HLA-B*08:01	NetMHCcons-1.1	0.9880	0.9610	0.9670	0.9640	0.9270
	NetMHCstabpan-1.0	0.9880	0.9610	0.9670	0.9640	0.9280
	NetMHCpan-4.1	0.9810	0.9510	0.9550	0.9530	0.9070
	ACME	0.9730	0.9150	0.9300	0.9230	0.8460
	HLAB	0.9608	0.9697	0.8824	0.9254	0.8543
	Anthem	0.9520	0.7820	0.9420	0.8620	0.7360
	MixMHCpred-2.0.2	0.9360	0.8820	0.8730	0.8770	0.7570
	MHCNetSeq	0.7270	0.7510	0.6700	0.7110	0.4250
HLA-B*15:01	Anthem	0.9730	0.9390	0.9610	0.9500	0.9000
	NetMHCpan-4.1	0.9730	0.9500	0.9600	0.9550	0.9100
	NetMHCstabpan-1.0	0.9730	0.9410	0.9590	0.9500	0.9000
	ACME	0.9720	0.9400	0.9600	0.9500	0.9010
	NetMHCcons-1.1	0.9710	0.9320	0.9660	0.9490	0.8980
	MixMHCpred-2.0.2	0.9680	0.9280	0.9630	0.9460	0.8920
	HLAB	0.9560	0.8341	0.8973	0.8658	0.7329
	MHCNetSeq	0.9160	0.9870	0.3510	0.6690	0.4370
HLA-B*27:01	HLAB	0.9987	0.9727	1.0000	0.9864	0.9732
	MixMHCpred-2.0.2	0.9980	0.9810	0.9870	0.9840	0.9690
	NetMHCpan-4.1	0.9950	0.9830	0.9780	0.9800	0.9610
	Anthem	0.9930	0.9620	0.9890	0.9750	0.9510
	ACME	0.9870	0.9780	0.9500	0.9640	0.9290
	NetMHCcons-1.1	0.9830	0.9420	0.9530	0.9470	0.8950

	NetMHCstabpan-1.0	0.9810	0.9490	0.9420	0.9450	0.8910
	MHCNetSeq	0.9010	1.0000	0.2110	0.6060	0.3410
HLA-B*27:02	HLAB	0.9997	1.0000	0.9831	0.9915	0.9831
	MixMHCpred-2.0.2	0.9990	1.0000	0.9910	0.9950	0.9910
	Anthem	0.9980	0.9810	0.9850	0.9830	0.9660
	NetMHCstabpan-1.0	0.9970	0.9710	0.9790	0.9750	0.9510
	NetMHCpan-4.1	0.9940	0.9850	0.9760	0.9800	0.9610
	NetMHCcons-1.1	0.9940	0.9720	0.9790	0.9760	0.9510
	ACME	0.9870	0.9650	0.9680	0.9670	0.9340
	MHCNetSeq	0.9660	1.0000	0.2970	0.6490	0.4170
HLA-B*27:03	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9990	0.9760	1.0000	0.9870	0.9760
	NetMHCpan-4.1	0.9970	0.9780	0.9870	0.9820	0.9650
	NetMHCcons-1.1	0.9970	0.9870	0.9890	0.9880	0.9760
	NetMHCstabpan-1.0	0.9970	0.9840	0.9890	0.9860	0.9730
	Anthem	0.9940	0.9730	0.9810	0.9770	0.9540
	ACME	0.9920	0.9730	0.9650	0.9690	0.9380
	MHCNetSeq	0.9890	1.0000	0.6900	0.8440	0.7260
HLA-B*27:04	HLAB	0.9872	0.9615	0.9630	0.9623	0.9245
	NetMHCcons-1.1	0.9820	0.9620	0.9920	0.9770	0.9540
	NetMHCstabpan-1.0	0.9820	0.9620	0.9960	0.9790	0.9580
	NetMHCpan-4.1	0.9810	0.9620	0.9890	0.9750	0.9500
	ACME	0.9770	0.9540	0.9890	0.9720	0.9430
	Anthem	0.9740	0.9540	0.9780	0.9660	0.9320
	MHCNetSeq	0.9730	1.0000	0.4190	0.7100	0.5150
	MixMHCpred-2.0.2	0.9670	0.9620	1.0000	0.9810	0.9620
HLA-B*27:05	HLAB	0.8716	0.7705	0.8479	0.8092	0.6203
	Anthem	0.8270	0.6420	0.8380	0.7400	0.4900
	MixMHCpred-2.0.2	0.7730	0.6890	0.7090	0.6990	0.3980
	NetMHCstabpan-1.0	0.7400	0.6190	0.7620	0.6900	0.3850
	MHCNetSeq	0.7350	0.8850	0.2990	0.5920	0.2280
	NetMHCcons-1.1	0.7310	0.6110	0.7450	0.6780	0.3600
	ACME	0.7190	0.5960	0.7360	0.6660	0.3360
	NetMHCpan-4.1	0.7120	0.5960	0.7450	0.6700	0.3440
HLA-B*27:06	MixMHCpred-2.0.2	1.0000	1.0000	1.0000	1.0000	1.0000
	Anthem	0.9970	1.0000	0.9770	0.9880	0.9780
	ACME	0.9960	0.9920	0.9800	0.9860	0.9720
	NetMHCpan-4.1	0.9950	0.9880	0.9640	0.9760	0.9530
	NetMHCstabpan-1.0	0.9930	0.9760	0.9760	0.9760	0.9530
	NetMHCcons-1.1	0.9920	0.9720	0.9760	0.9740	0.9490
	HLAB	0.9862	1.0000	0.9231	0.9608	0.9245
	MHCNetSeq	0.9770	1.0000	0.4520	0.7260	0.5400
HLA-B*27:07	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9990	1.0000	0.9970	0.9980	0.9970

	NetMHCpan-4.1	0.9960	0.9980	0.9820	0.9900	0.9800
	Anthem	0.9930	0.9870	0.9800	0.9830	0.9670
	ACME	0.9920	0.9880	0.9650	0.9770	0.9540
	NetMHCstabpan-1.0	0.9910	0.9810	0.9680	0.9750	0.9500
	NetMHCcons-1.1	0.9890	0.9850	0.9600	0.9720	0.9460
	MHCNetSeq	0.9870	1.0000	0.2950	0.6480	0.4160
HLA-B*27:08	HLAB	0.9991	0.9865	0.9733	0.9799	0.9598
	MixMHCpred-2.0.2	0.9950	0.9850	0.9860	0.9860	0.9720
	Anthem	0.9890	0.9860	0.9740	0.9800	0.9610
	NetMHCstabpan-1.0	0.9890	0.9690	0.9620	0.9650	0.9310
	NetMHCcons-1.1	0.9880	0.9690	0.9570	0.9630	0.9260
	NetMHCpan-4.1	0.9870	0.9740	0.9610	0.9680	0.9350
	ACME	0.9770	0.9780	0.9510	0.9650	0.9300
HLA-B*27:09	HLAB	0.9715	0.9362	0.9507	0.9435	0.8870
	Anthem	0.9530	0.8720	0.9380	0.9050	0.8130
	NetMHCpan-4.1	0.9470	0.8890	0.9190	0.9040	0.8090
	MixMHCpred-2.0.2	0.9440	0.9040	0.9230	0.9130	0.8280
	NetMHCcons-1.1	0.9370	0.8660	0.9370	0.9010	0.8050
	NetMHCstabpan-1.0	0.9370	0.8660	0.9500	0.9080	0.8200
	ACME	0.9300	0.8620	0.9230	0.8930	0.7870
	MHCNetSeq	0.9280	0.9790	0.2860	0.6320	0.3660
HLA-B*35:01	Anthem	0.9560	0.8510	0.9390	0.8950	0.7940
	HLAB	0.9465	0.8605	0.9154	0.8880	0.7771
	NetMHCpan-4.1	0.9400	0.8710	0.9260	0.8980	0.7970
	MixMHCpred-2.0.2	0.9370	0.8620	0.9480	0.9050	0.8130
	ACME	0.9300	0.8610	0.9290	0.8950	0.7930
	NetMHCstabpan-1.0	0.9250	0.8730	0.9420	0.9070	0.8170
	NetMHCcons-1.1	0.9240	0.8750	0.9380	0.9070	0.8150
	MHCNetSeq	0.8190	0.6910	0.8060	0.7480	0.5000
HLA-B*35:03	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCpan-4.1	0.9980	1.0000	0.9970	0.9980	0.9970
	ACME	0.9960	0.9860	0.9760	0.9810	0.9620
	Anthem	0.9850	0.9310	0.9800	0.9560	0.9130
	NetMHCcons-1.1	0.9850	0.9380	0.9560	0.9460	0.8930
	MixMHCpred-2.0.2	0.9820	0.9350	0.9660	0.9500	0.9010
	NetMHCstabpan-1.0	0.9820	0.9280	0.9480	0.9380	0.8760
	MHCNetSeq	0.8610	0.9000	0.7520	0.8260	0.6610
HLA-B*35:08	HLAB	0.9881	0.9630	1.0000	0.9818	0.9642
	MixMHCpred-2.0.2	0.9750	0.9330	0.9300	0.9310	0.8640
	Anthem	0.9640	0.9410	0.9330	0.9370	0.8750
	NetMHCpan-4.1	0.9490	0.9260	0.9960	0.9610	0.9240
	NetMHCcons-1.1	0.9460	0.8890	0.9670	0.9280	0.8580
	NetMHCstabpan-1.0	0.9450	0.8890	0.9630	0.9260	0.8540
	ACME	0.9430	0.9080	0.9480	0.9280	0.8570

	MHCNetSeq	0.9320	1.0000	0.7710	0.8850	0.7920
HLA-B*37:01	NetMHCpan-4.1	0.9880	0.9930	0.9790	0.9860	0.9730
	HLAB	0.9857	0.9286	1.0000	0.9655	0.9330
	NetMHCstabpan-1.0	0.9830	0.9930	0.9360	0.9640	0.9320
	NetMHCcons-1.1	0.9800	0.9860	0.9360	0.9610	0.9240
	ACME	0.9680	0.9290	0.9720	0.9500	0.9020
	Anthem	0.9540	0.8290	0.9540	0.8910	0.7940
	MixMHCpred-2.0.2	0.9540	0.9360	0.9220	0.9290	0.8600
	MHCNetSeq	0.9020	0.9430	0.5720	0.7570	0.5540
HLA-B*39:01	HLAB	0.9992	1.0000	0.9714	0.9855	0.9714
	NetMHCcons-1.1	0.9990	1.0000	0.9940	0.9970	0.9940
	NetMHCstabpan-1.0	0.9990	1.0000	0.9940	0.9970	0.9940
	NetMHCpan-4.1	0.9970	0.9910	0.9910	0.9910	0.9820
	ACME	0.9970	1.0000	0.9880	0.9940	0.9880
	MixMHCpred-2.0.2	0.9940	0.9650	0.9770	0.9700	0.9430
	Anthem	0.9930	0.9350	0.9910	0.9630	0.9280
	MHCNetSeq	0.9920	1.0000	0.9180	0.9590	0.9220
HLA-B*40:01	Anthem	0.9960	0.9530	0.9900	0.9720	0.9440
	NetMHCcons-1.1	0.9960	0.9760	0.9810	0.9780	0.9570
	NetMHCstabpan-1.0	0.9960	0.9760	0.9830	0.9790	0.9590
	ACME	0.9960	0.9750	0.9860	0.9800	0.9600
	NetMHCpan-4.1	0.9950	0.9810	0.9750	0.9780	0.9560
	HLAB	0.9921	0.9909	0.9820	0.9864	0.9729
	MixMHCpred-2.0.2	0.9920	0.9570	0.9650	0.9600	0.9210
	MHCNetSeq	0.9850	0.9360	0.9440	0.9400	0.8810
HLA-B*40:02	MixMHCpred-2.0.2	0.9960	0.9690	0.9800	0.9750	0.9500
	Anthem	0.9930	0.9600	0.9740	0.9670	0.9340
	HLAB	0.9926	0.9862	0.9726	0.9794	0.9589
	NetMHCpan-4.1	0.9900	0.9830	0.9720	0.9770	0.9550
	ACME	0.9870	0.9740	0.9660	0.9700	0.9400
	NetMHCstabpan-1.0	0.9860	0.9720	0.9720	0.9720	0.9450
	NetMHCcons-1.1	0.9840	0.9690	0.9640	0.9660	0.9330
	MHCNetSeq	0.9800	0.9860	0.8180	0.9020	0.8160
HLA-B*44:02	NetMHCpan-4.1	0.9900	0.9530	0.9690	0.9610	0.9220
	ACME	0.9880	0.9610	0.9530	0.9570	0.9140
	HLAB	0.9870	0.9626	0.9734	0.9680	0.9361
	NetMHCstabpan-1.0	0.9840	0.9510	0.9740	0.9630	0.9260
	Anthem	0.9830	0.9500	0.9630	0.9570	0.9130
	NetMHCcons-1.1	0.9830	0.9520	0.9710	0.9610	0.9220
	MixMHCpred-2.0.2	0.9820	0.9420	0.9680	0.9550	0.9100
	MHCNetSeq	0.9770	0.9630	0.8260	0.8940	0.7960
HLA-B*44:03	HLAB	0.9975	0.9728	0.9932	0.9831	0.9663
	NetMHCcons-1.1	0.9960	0.9820	0.9860	0.9840	0.9680
	NetMHCpan-4.1	0.9950	0.9840	0.9860	0.9850	0.9700

	NetMHCstabpan-1.0	0.9950	0.9800	0.9830	0.9810	0.9630
	ACME	0.9950	0.9830	0.9800	0.9820	0.9630
	MixMHCpred-2.0.2	0.9940	0.9770	0.9770	0.9770	0.9540
	MHCNetSeq	0.9900	0.9730	0.8820	0.9270	0.8580
	Anthem	0.9890	0.9580	0.9880	0.9730	0.9460
HLA-B*45:01	NetMHCpan-4.1	0.9840	0.9580	0.9740	0.9660	0.9330
	HLAB	0.9788	0.9677	0.9688	0.9683	0.9365
	NetMHCcons-1.1	0.9770	0.9250	0.9480	0.9370	0.8750
	ACME	0.9770	0.9320	0.9580	0.9450	0.8910
	MixMHCpred-2.0.2	0.9740	0.9350	0.8970	0.9160	0.8340
	NetMHCstabpan-1.0	0.9710	0.9250	0.9480	0.9370	0.8750
	Anthem	0.9460	0.8580	0.9670	0.9120	0.8310
	MHCNetSeq	0.8910	0.8930	0.7390	0.8160	0.6410
HLA-B*46:01	HLAB	0.9532	0.8889	0.9474	0.9189	0.8387
	Anthem	0.9090	0.6450	0.9500	0.7970	0.6260
	MixMHCpred-2.0.2	0.9050	0.8330	0.9000	0.8670	0.7370
	MHCNetSeq	0.8890	1.0000	0.4280	0.7140	0.5200
	ACME	0.8640	0.7670	0.8940	0.8310	0.6700
	NetMHCstabpan-1.0	0.8520	0.8000	0.8940	0.8470	0.6990
	NetMHCpan-4.1	0.8480	0.8000	0.8890	0.8450	0.6930
	NetMHCcons-1.1	0.8380	0.7890	0.9390	0.8640	0.7390
HLA-B*49:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCpan-4.1	0.9920	0.9960	0.9830	0.9890	0.9790
	NetMHCstabpan-1.0	0.9910	1.0000	0.9790	0.9890	0.9790
	NetMHCcons-1.1	0.9890	0.9780	0.9830	0.9800	0.9610
	ACME	0.9880	0.9870	0.9780	0.9830	0.9660
	MixMHCpred-2.0.2	0.9790	0.9570	0.9310	0.9440	0.8890
	Anthem	0.9660	0.8790	0.9320	0.9050	0.8130
	MHCNetSeq	0.9260	1.0000	0.4390	0.7200	0.5290
HLA-B*51:01	HLAB	0.9807	0.9444	0.9670	0.9558	0.9118
	Anthem	0.9560	0.8740	0.9290	0.9010	0.8040
	NetMHCpan-4.1	0.8660	0.7650	0.7860	0.7760	0.5520
	NetMHCcons-1.1	0.8590	0.7530	0.7550	0.7540	0.5120
	NetMHCstabpan-1.0	0.8550	0.7770	0.7270	0.7520	0.5050
	ACME	0.8520	0.7490	0.7700	0.7590	0.5190
	MixMHCpred-2.0.2	0.8450	0.7500	0.7980	0.7740	0.5510
	MHCNetSeq	0.7160	0.6130	0.7280	0.6710	0.3450
HLA-B*54:01	HLAB	0.9892	0.9333	0.9355	0.9344	0.8688
	MixMHCpred-2.0.2	0.9820	0.9200	0.9470	0.9330	0.8680
	Anthem	0.9600	0.8530	0.9280	0.8910	0.7860
	NetMHCstabpan-1.0	0.9570	0.9100	0.9270	0.9180	0.8380
	NetMHCcons-1.1	0.9550	0.8930	0.9270	0.9100	0.8220
	ACME	0.9550	0.8840	0.9400	0.9120	0.8260
	NetMHCpan-4.1	0.9460	0.8970	0.9200	0.9080	0.8180

	MHCNetSeq	0.8790	0.9670	0.6100	0.7880	0.6170
HLA-B*56:01	HLAB	1.0000	0.3750	1.0000	0.6970	0.4859
	MixMHCpred-2.0.2	0.9990	1.0000	0.9880	0.9940	0.9880
	NetMHCpan-4.1	0.9990	1.0000	0.9940	0.9970	0.9940
	NetMHCstabpan-1.0	0.9990	1.0000	0.9940	0.9970	0.9940
	NetMHCcons-1.1	0.9970	1.0000	0.9880	0.9940	0.9880
	ACME	0.9930	0.9940	0.9810	0.9880	0.9750
	Anthem	0.9910	0.9000	0.9840	0.9420	0.8900
	MHCNetSeq	0.9620	1.0000	0.5500	0.7750	0.6170
HLA-B*57:01	HLAB	0.9683	0.9184	0.9584	0.9384	0.8775
	Anthem	0.9660	0.9200	0.9640	0.9420	0.8850
	MixMHCpred-2.0.2	0.9630	0.9210	0.9530	0.9370	0.8750
	NetMHCcons-1.1	0.9600	0.9080	0.9460	0.9270	0.8540
	NetMHCstabpan-1.0	0.9600	0.9060	0.9430	0.9250	0.8510
	ACME	0.9580	0.9110	0.9400	0.9260	0.8520
	NetMHCpan-4.1	0.9570	0.9070	0.9530	0.9300	0.8610
	MHCNetSeq	0.9530	0.9570	0.6840	0.8210	0.6660
HLA-B*57:03	HLAB	0.9860	0.9581	0.9702	0.9642	0.9284
	Anthem	0.9850	0.9440	0.9660	0.9550	0.9100
	NetMHCpan-4.1	0.9830	0.9470	0.9520	0.9490	0.8990
	NetMHCstabpan-1.0	0.9830	0.9510	0.9500	0.9500	0.9010
	NetMHCcons-1.1	0.9820	0.9510	0.9460	0.9490	0.8980
	ACME	0.9760	0.9380	0.9370	0.9380	0.8750
	MHCNetSeq	0.9490	0.9580	0.7000	0.8280	0.6810
HLA-B*58:01	HLAB	0.9814	0.9709	0.9712	0.9710	0.9420
	ACME	0.9780	0.9450	0.9610	0.9530	0.9070
	NetMHCstabpan-1.0	0.9750	0.9470	0.9580	0.9520	0.9050
	NetMHCcons-1.1	0.9740	0.9450	0.9600	0.9530	0.9060
	Anthem	0.9720	0.9360	0.9750	0.9550	0.9120
	NetMHCpan-4.1	0.9710	0.9380	0.9710	0.9540	0.9100
	MixMHCpred-2.0.2	0.9680	0.9380	0.9540	0.9460	0.8920
	MHCNetSeq	0.9650	0.9710	0.6840	0.8280	0.6840
HLA-C*01:02	HLAB	0.9056	0.7045	0.9556	0.8315	0.6833
	NetMHCstabpan-1.0	0.8930	0.8270	0.9550	0.8910	0.7890
	NetMHCpan-4.1	0.8820	0.8270	0.9000	0.8640	0.7310
	NetMHCcons-1.1	0.8790	0.8390	0.9110	0.8750	0.7530
	Anthem	0.8710	0.7640	0.9300	0.8470	0.7050
	MixMHCpred-2.0.2	0.8660	0.8160	0.7620	0.7890	0.5820
	MHCNetSeq	0.5690	0.8180	0.2710	0.5440	0.1080
HLA-C*02:02	HLAB	0.9929	0.8462	1.0000	0.9245	0.8585
	MixMHCpred-2.0.2	0.9900	0.9580	0.9690	0.9640	0.9270
	NetMHCpan-4.1	0.9820	0.9500	0.9270	0.9390	0.8790
	NetMHCcons-1.1	0.9770	0.9350	0.9190	0.9270	0.8570
	NetMHCstabpan-1.0	0.9740	0.9430	0.9040	0.9230	0.8490

	Anthem	0.9650	0.8850	0.9510	0.9180	0.8390
HLA-C*03:03	MixMHCpred-2.0.2	0.9740	0.9200	0.9550	0.9380	0.8760
	HLAB	0.9548	0.9000	0.9048	0.9024	0.8048
	NetMHCcons-1.1	0.9430	0.8650	0.9700	0.9180	0.8420
	NetMHCpan-4.1	0.9410	0.8750	0.9650	0.9200	0.8450
	NetMHCstabpan-1.0	0.9400	0.8700	0.9650	0.9180	0.8410
	Anthem	0.9390	0.8000	0.9200	0.8600	0.7280
	MHCNetSeq	0.8840	0.8500	0.7350	0.7920	0.5900
HLA-C*03:04	HLAB	0.9923	0.9200	1.0000	0.9608	0.9243
	MixMHCpred-2.0.2	0.9810	0.9400	0.9560	0.9480	0.8970
	NetMHCcons-1.1	0.9790	0.9120	0.9600	0.9360	0.8740
	NetMHCstabpan-1.0	0.9780	0.9120	0.9600	0.9360	0.8740
	NetMHCpan-4.1	0.9710	0.9120	0.9200	0.9160	0.8340
	Anthem	0.9680	0.8160	0.9700	0.8930	0.7970
	MHCNetSeq	0.8740	0.8400	0.7320	0.7860	0.5770
HLA-C*04:01	HLAB	0.8353	0.8438	0.7231	0.7829	0.5707
	Anthem	0.8240	0.6780	0.8520	0.7650	0.5450
	NetMHCpan-4.1	0.7720	0.6590	0.8370	0.7490	0.5070
	MixMHCpred-2.0.2	0.7670	0.6860	0.8370	0.7620	0.5310
	NetMHCcons-1.1	0.7620	0.6300	0.8310	0.7310	0.4740
	NetMHCstabpan-1.0	0.7600	0.6750	0.7810	0.7280	0.4600
	MHCNetSeq	0.6950	0.9380	0.2310	0.5850	0.2350
HLA-C*05:01	HLAB	0.9768	0.9500	0.9836	0.9669	0.9344
	MixMHCpred-2.0.2	0.9650	0.9120	0.9530	0.9320	0.8660
	Anthem	0.9640	0.8800	0.9460	0.9130	0.8290
	NetMHCpan-4.1	0.9630	0.9400	0.9250	0.9320	0.8650
	NetMHCcons-1.1	0.9580	0.9400	0.9330	0.9370	0.8730
	NetMHCstabpan-1.0	0.9570	0.9250	0.9480	0.9370	0.8730
	MHCNetSeq	0.8870	1.0000	0.0780	0.5390	0.1960
HLA-C*06:02	HLAB	0.8837	0.8286	0.8333	0.8310	0.6619
	Anthem	0.8560	0.7890	0.8190	0.8040	0.6110
	NetMHCpan-4.1	0.8410	0.8150	0.7600	0.7870	0.5770
	NetMHCcons-1.1	0.8290	0.7740	0.8060	0.7900	0.5810
	NetMHCstabpan-1.0	0.8150	0.7230	0.8230	0.7730	0.5510
	MixMHCpred-2.0.2	0.8120	0.7400	0.8740	0.8070	0.6220
	MHCNetSeq	0.7070	0.9740	0.1000	0.5370	0.1490
HLA-C*07:01	NetMHCstabpan-1.0	0.9880	0.9880	0.9780	0.9830	0.9660
	NetMHCcons-1.1	0.9870	0.9830	0.9590	0.9710	0.9420
	NetMHCpan-4.1	0.9720	0.9540	0.9320	0.9430	0.8860
	Anthem	0.9690	0.8880	0.9380	0.9130	0.8280
	HLAB	0.9657	0.8293	1.0000	0.9157	0.8431
	MixMHCpred-2.0.2	0.9120	0.8830	0.8440	0.8630	0.7280
	MHCNetSeq	0.6300	0.5490	0.6800	0.6150	0.2320
HLA-C*07:02	MixMHCpred-2.0.2	0.9640	0.9400	0.9700	0.9550	0.9110

		HLAB	0.9333	0.9500	0.7143	0.8293	0.6807
		NetMHCpan-4.1	0.9330	0.9350	0.8950	0.9150	0.8320
		NetMHCcons-1.1	0.9260	0.8750	0.8850	0.8800	0.7620
		NetMHCstabpan-1.0	0.9230	0.8950	0.8700	0.8820	0.7660
		Anthem	0.9060	0.8200	0.9560	0.8880	0.7850
		MHCNetSeq	0.8560	0.9100	0.5200	0.7150	0.4660
	HLA-C*08:02	NetMHCpan-4.1	0.9940	0.9700	0.9870	0.9780	0.9570
		NetMHCcons-1.1	0.9900	0.9670	0.9530	0.9600	0.9210
		HLAB	0.9892	0.9333	0.9677	0.9508	0.9020
		NetMHCstabpan-1.0	0.9890	0.9460	0.9830	0.9650	0.9310
		MixMHCpred-2.0.2	0.9880	0.9430	0.9670	0.9550	0.9110
		Anthem	0.9800	0.9130	0.9770	0.9450	0.8930
		MHCNetSeq	0.9570	1.0000	0.4170	0.7080	0.5120
	HLA-C*16:01	MixMHCpred-2.0.2	0.9840	0.9360	0.9720	0.9540	0.9080
		NetMHCpan-4.1	0.9830	0.9720	0.9430	0.9570	0.9170
		NetMHCcons-1.1	0.9620	0.9930	0.9000	0.9470	0.8980
		NetMHCstabpan-1.0	0.9620	1.0000	0.9000	0.9500	0.9050
		HLAB	0.9452	1.0000	0.8667	0.9310	0.8708
		Anthem	0.9430	0.7860	0.9520	0.8690	0.7490
		MHCNetSeq	0.8160	0.9500	0.2500	0.6000	0.2800
12	HLA-A*01:01	MixMHCpred-2.0.2	0.9910	0.9560	0.9630	0.9600	0.9190
		NetMHCpan-4.1	0.9910	0.9640	0.9650	0.9640	0.9290
		Anthem	0.9900	0.9430	0.9740	0.9590	0.9180
		NetMHCcons-1.1	0.9870	0.9560	0.9420	0.9490	0.8980
		NetMHCstabpan-1.0	0.9870	0.9390	0.9510	0.9450	0.8910
		ACME	0.9870	0.9560	0.9410	0.9480	0.8970
		HLAB	0.9768	0.9538	0.9540	0.9539	0.9078
		MHCNetSeq	0.8800	0.9940	0.1280	0.5610	0.2430
	HLA-A*02:01	Anthem	0.9380	0.8620	0.8950	0.8780	0.7570
		HLAB	0.9334	0.9211	0.8646	0.8928	0.7869
		NetMHCcons-1.1	0.9310	0.8470	0.9310	0.8890	0.7810
		NetMHCstabpan-1.0	0.9310	0.8520	0.9180	0.8850	0.7710
		MixMHCpred-2.0.2	0.9260	0.8520	0.8810	0.8660	0.7330
		ACME	0.9240	0.8600	0.8860	0.8730	0.7460
		NetMHCpan-4.1	0.9190	0.8520	0.9060	0.8790	0.7590
		MHCNetSeq	0.8230	0.7360	0.7750	0.7550	0.5120
	HLA-A*03:01	NetMHCstabpan-1.0	0.9820	0.9630	0.9610	0.9620	0.9240
		NetMHCpan-4.1	0.9810	0.9700	0.9510	0.9600	0.9210
		NetMHCcons-1.1	0.9810	0.9610	0.9630	0.9620	0.9240
		HLAB	0.9717	0.9540	0.9432	0.9486	0.8972
		ACME	0.9690	0.9560	0.9520	0.9540	0.9080
		Anthem	0.9630	0.9040	0.9430	0.9230	0.8470
		MixMHCpred-2.0.2	0.9610	0.9110	0.9130	0.9120	0.8250
		MHCNetSeq	0.8920	0.8620	0.7100	0.7860	0.5790

HLA-A*11:01	HLAB	0.9844	0.9355	0.9683	0.9520	0.9044
	NetMHCpan-4.1	0.9680	0.9300	0.9580	0.9450	0.8890
	NetMHCstabpan-1.0	0.9610	0.9490	0.9730	0.9610	0.9210
	ACME	0.9600	0.9330	0.9600	0.9470	0.8940
	NetMHCcons-1.1	0.9590	0.9500	0.9740	0.9620	0.9250
	Anthem	0.9560	0.9130	0.9640	0.9380	0.8780
	MixMHCpred-2.0.2	0.9560	0.9350	0.9820	0.9590	0.9190
	MHCNetSeq	0.9410	0.9680	0.3520	0.6600	0.4040
HLA-A*24:02	HLAB	0.9759	0.9194	0.9683	0.9440	0.8890
	MixMHCpred-2.0.2	0.9690	0.9490	0.9600	0.9540	0.9080
	Anthem	0.9630	0.9250	0.9540	0.9400	0.8800
	NetMHCpan-4.1	0.9580	0.9220	0.9450	0.9340	0.8680
	NetMHCcons-1.1	0.9550	0.9380	0.9270	0.9330	0.8660
	NetMHCstabpan-1.0	0.9510	0.9450	0.9240	0.9350	0.8700
	ACME	0.9510	0.9010	0.9370	0.9190	0.8400
	MHCNetSeq	0.8430	0.9520	0.3630	0.6570	0.3880
HLA-A*29:02	MixMHCpred-2.0.2	0.9620	0.9090	0.9820	0.9460	0.8930
	Anthem	0.9560	0.9030	0.9370	0.9200	0.8420
	ACME	0.9530	0.9090	0.9550	0.9320	0.8650
	HLAB	0.9501	0.9394	0.9118	0.9254	0.8512
	NetMHCstabpan-1.0	0.9470	0.8850	0.9540	0.9200	0.8420
	NetMHCcons-1.1	0.9460	0.8790	0.9790	0.9280	0.8620
	NetMHCpan-4.1	0.9300	0.8790	0.9670	0.9220	0.8490
	MHCNetSeq	0.9270	1.0000	0.1550	0.5770	0.2850
HLA-A*31:01	HLAB	0.9692	0.9600	0.8077	0.8824	0.7749
	MixMHCpred-2.0.2	0.9570	0.8920	0.9680	0.9300	0.8630
	Anthem	0.9530	0.8720	0.9090	0.8900	0.7840
	NetMHCpan-4.1	0.9440	0.9120	0.9000	0.9060	0.8130
	NetMHCcons-1.1	0.9300	0.8640	0.9080	0.8860	0.7740
	NetMHCstabpan-1.0	0.9290	0.8720	0.9000	0.8860	0.7740
	ACME	0.9030	0.8200	0.8920	0.8560	0.7150
	MHCNetSeq	0.8600	1.0000	0.1400	0.5700	0.2700
HLA-A*68:01	NetMHCpan-4.1	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9980	0.9940	0.9880	0.9910	0.9820
	ACME	0.9970	1.0000	0.9940	0.9970	0.9940
	NetMHCcons-1.1	0.9960	1.0000	0.9810	0.9910	0.9820
	NetMHCstabpan-1.0	0.9950	1.0000	0.9810	0.9910	0.9820
	Anthem	0.9890	0.8750	0.9780	0.9260	0.8610
	HLAB	0.9706	1.0000	0.9412	0.9697	0.9412
HLA-A*68:02	HLAB	0.9207	0.9211	0.7949	0.8571	0.7208
	Anthem	0.8770	0.8000	0.8700	0.8350	0.6730
	MixMHCpred-2.0.2	0.8670	0.7710	0.8950	0.8330	0.6720
	NetMHCstabpan-1.0	0.8530	0.7500	0.8970	0.8240	0.6560
	NetMHCcons-1.1	0.8500	0.7340	0.9080	0.8210	0.6520

	ACME	0.8360	0.7580	0.8450	0.8010	0.6060
	NetMHCpan-4.1	0.8310	0.7400	0.8870	0.8130	0.6350
	MHCNetSeq	0.7300	1.0000	0.1450	0.5720	0.2730
HLA-B*07:02	NetMHCpan-4.1	0.9870	0.9620	0.9720	0.9670	0.9350
	ACME	0.9830	0.9460	0.9670	0.9560	0.9130
	Anthem	0.9820	0.9360	0.9570	0.9470	0.8940
	NetMHCcons-1.1	0.9800	0.9310	0.9630	0.9470	0.8950
	NetMHCstabpan-1.0	0.9800	0.9300	0.9590	0.9450	0.8900
	MixMHCpred-2.0.2	0.9790	0.9460	0.9510	0.9480	0.8960
	HLAB	0.9774	0.9541	0.9636	0.9589	0.9178
	MHCNetSeq	0.8490	1.0000	0.1460	0.5730	0.2790
HLA-B*08:01	NetMHCstabpan-1.0	0.9910	1.0000	0.9870	0.9930	0.9870
	NetMHCcons-1.1	0.9900	0.9950	0.9810	0.9880	0.9760
	NetMHCpan-4.1	0.9870	0.9760	0.9590	0.9670	0.9350
	HLAB	0.9708	0.8919	0.9737	0.9333	0.8693
	ACME	0.9680	0.9240	0.9140	0.9190	0.8390
	Anthem	0.9570	0.8000	0.9560	0.8780	0.7670
	MixMHCpred-2.0.2	0.9430	0.9240	0.8650	0.8950	0.7910
	MHCNetSeq	0.5600	0.7570	0.3320	0.5450	0.0970
HLA-B*15:01	HLAB	0.9599	0.8701	0.9103	0.8903	0.7812
	MixMHCpred-2.0.2	0.9400	0.8670	0.9190	0.8940	0.7890
	NetMHCstabpan-1.0	0.9300	0.8560	0.9140	0.8850	0.7720
	Anthem	0.9250	0.8410	0.9410	0.8910	0.7870
	NetMHCcons-1.1	0.9250	0.8360	0.9280	0.8830	0.7690
	ACME	0.9240	0.8690	0.9250	0.8970	0.7950
	NetMHCpan-4.1	0.9150	0.8470	0.9220	0.8850	0.7720
	MHCNetSeq	0.8780	1.0000	0.0470	0.5230	0.1500
HLA-B*27:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9980	0.9920	0.9790	0.9860	0.9710
	NetMHCpan-4.1	0.9980	1.0000	0.9890	0.9950	0.9900
	ACME	0.9960	1.0000	0.9840	0.9920	0.9850
	NetMHCcons-1.1	0.9900	0.9730	0.9690	0.9710	0.9420
	NetMHCstabpan-1.0	0.9890	0.9660	0.9740	0.9700	0.9400
	Anthem	0.9750	0.9210	0.9760	0.9490	0.8990
HLA-B*27:02	MixMHCpred-2.0.2	0.9960	0.9690	0.9750	0.9720	0.9440
	NetMHCpan-4.1	0.9930	0.9680	0.9780	0.9730	0.9460
	HLAB	0.9917	1.0000	0.9500	0.9748	0.9508
	Anthem	0.9840	0.9220	0.9800	0.9510	0.9030
	NetMHCstabpan-1.0	0.9840	0.9340	0.9730	0.9540	0.9080
	NetMHCcons-1.1	0.9810	0.9400	0.9510	0.9460	0.8920
	ACME	0.9680	0.9400	0.9440	0.9420	0.8850
HLA-B*27:03	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9990	1.0000	0.9870	0.9930	0.9870
	NetMHCstabpan-1.0	0.9990	1.0000	0.9930	0.9970	0.9940

	NetMHCcons-1.1	0.9980	1.0000	0.9870	0.9930	0.9870
	NetMHCpan-4.1	0.9970	1.0000	0.9930	0.9970	0.9940
	ACME	0.9940	1.0000	0.9870	0.9930	0.9870
	Anthem	0.9660	0.9470	0.9730	0.9600	0.9260
	MHCNetSeq	0.9190	1.0000	0.2470	0.6230	0.3690
HLA-B*27:05	Anthem	0.8210	0.6890	0.7870	0.7380	0.4790
	HLAB	0.8016	0.8770	0.6088	0.7428	0.5042
	MixMHCpred-2.0.2	0.7350	0.6060	0.7400	0.6730	0.3490
	NetMHCstabpan-1.0	0.6840	0.5700	0.6950	0.6330	0.2680
	NetMHCcons-1.1	0.6820	0.5920	0.6670	0.6290	0.2590
	NetMHCpan-4.1	0.6450	0.5020	0.7290	0.6160	0.2390
	ACME	0.6420	0.4920	0.7510	0.6220	0.2520
	MHCNetSeq	0.6420	0.9710	0.0640	0.5170	0.0810
HLA-B*27:07	MixMHCpred-2.0.2	0.9970	0.9790	0.9870	0.9830	0.9670
	HLAB	0.9833	0.9583	0.9600	0.9592	0.9183
	NetMHCpan-4.1	0.9860	0.9620	0.9670	0.9640	0.9300
	NetMHCstabpan-1.0	0.9830	0.9620	0.9580	0.9600	0.9220
	NetMHCcons-1.1	0.9810	0.9620	0.9580	0.9600	0.9220
	Anthem	0.9680	0.9580	0.9650	0.9620	0.9240
	ACME	0.9680	0.9420	0.9500	0.9460	0.8930
HLA-B*27:08	MixMHCpred-2.0.2	0.9960	0.9880	0.9750	0.9810	0.9630
	NetMHCpan-4.1	0.9830	0.9630	0.9690	0.9650	0.9320
	NetMHCstabpan-1.0	0.9820	0.9380	0.9530	0.9450	0.8910
	Anthem	0.9810	0.8880	0.9850	0.9360	0.8790
	NetMHCcons-1.1	0.9810	0.9410	0.9660	0.9530	0.9070
	ACME	0.9700	0.9500	0.9250	0.9380	0.8760
	HLAB	0.9328	0.9063	0.9394	0.9231	0.8464
HLA-B*27:09	HLAB	0.9474	0.9016	0.8710	0.8862	0.7728
	MixMHCpred-2.0.2	0.8970	0.7930	0.9790	0.8860	0.7870
	Anthem	0.8950	0.7900	0.9480	0.8690	0.7480
	NetMHCstabpan-1.0	0.8690	0.7980	0.9480	0.8730	0.7550
	NetMHCcons-1.1	0.8680	0.8000	0.9530	0.8760	0.7620
	ACME	0.8640	0.7970	0.9420	0.8700	0.7480
	NetMHCpan-4.1	0.8460	0.7870	0.9690	0.8780	0.7690
	MHCNetSeq	0.8060	1.0000	0.0760	0.5380	0.1960
HLA-B*35:01	HLAB	0.9437	0.8333	0.9189	0.8767	0.7557
	Anthem	0.9090	0.8220	0.8750	0.8490	0.7010
	MixMHCpred-2.0.2	0.8660	0.7560	0.8970	0.8260	0.6600
	ACME	0.8240	0.7610	0.8470	0.8040	0.6130
	NetMHCstabpan-1.0	0.7940	0.7110	0.8580	0.7850	0.5770
	NetMHCcons-1.1	0.7920	0.7220	0.8810	0.8020	0.6120
	NetMHCpan-4.1	0.7910	0.6800	0.8890	0.7850	0.5830
	MHCNetSeq	0.5830	0.7160	0.4310	0.5730	0.1570
HLA-B*40:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000

	NetMHCcons-1.1	0.9980	0.9970	0.9940	0.9950	0.9900
	NetMHCstabpan-1.00	0.9980	0.9970	0.9940	0.9950	0.9900
	ACME	0.9980	1.0000	0.9970	0.9980	0.9970
	Anthem	0.9970	1.0000	0.9830	0.9910	0.9830
	NetMHCpan-4.1	0.9970	1.0000	0.9900	0.9950	0.9900
	MixMHCpred-2.0.2	0.9950	0.9710	0.9740	0.9730	0.9460
	MHCNetSeq	0.9730	1.0000	0.5650	0.7820	0.6280
HLA-B*40:02	MixMHCpred-2.0.2	0.9970	0.9730	0.9900	0.9820	0.9640
	HLAB	0.9930	0.9512	0.9762	0.9639	0.9279
	NetMHCcons-1.1	0.9880	0.9710	0.9710	0.9710	0.9410
	NetMHCstabpan-1.00	0.9860	0.9680	0.9710	0.9700	0.9390
	Anthem	0.9820	0.9320	0.9790	0.9550	0.9120
	NetMHCpan-4.1	0.9790	0.9630	0.9830	0.9730	0.9470
	ACME	0.9770	0.9710	0.9760	0.9730	0.9460
	MHCNetSeq	0.8900	1.0000	0.1830	0.5910	0.3150
HLA-B*44:02	NetMHCpan-4.1	0.9970	0.9790	0.9880	0.9830	0.9660
	HLAB	0.9925	0.9385	0.9848	0.9618	0.9246
	MixMHCpred-2.0.2	0.9810	0.9370	0.9460	0.9410	0.8830
	ACME	0.9810	0.9200	0.9630	0.9420	0.8840
	NetMHCcons-1.1	0.9800	0.8980	0.9800	0.9390	0.8820
	NetMHCstabpan-1.00	0.9780	0.8980	0.9800	0.9390	0.8820
	Anthem	0.9740	0.8950	0.9790	0.9370	0.8780
	MHCNetSeq	0.8970	1.0000	0.0710	0.5350	0.1860
HLA-B*44:03	HLAB	0.9979	0.9535	1.0000	0.9770	0.9550
	ACME	0.9890	0.9530	0.9840	0.9690	0.9380
	NetMHCcons-1.1	0.9870	0.9630	0.9810	0.9720	0.9450
	MixMHCpred-2.0.2	0.9860	0.9580	0.9930	0.9760	0.9520
	NetMHCstabpan-1.00	0.9860	0.9580	0.9740	0.9660	0.9330
	NetMHCpan-4.1	0.9820	0.9530	0.9860	0.9700	0.9400
	Anthem	0.9690	0.8970	0.9920	0.9450	0.8940
	MHCNetSeq	0.9460	1.0000	0.1510	0.5760	0.2820
HLA-B*51:01	Anthem	0.9160	0.7920	0.9190	0.8550	0.7170
	HLAB	0.8987	0.8732	0.8056	0.8392	0.6801
	NetMHCcons-1.1	0.8860	0.7740	0.9220	0.8480	0.7040
	NetMHCstabpan-1.00	0.8800	0.7650	0.9050	0.8350	0.6770
	NetMHCpan-4.1	0.8750	0.7740	0.8760	0.8250	0.6530
	MixMHCpred-2.0.2	0.8730	0.7970	0.8350	0.8160	0.6330
	ACME	0.8660	0.8060	0.8130	0.8090	0.6190
	MHCNetSeq	0.5760	0.7950	0.2680	0.5310	0.0720
HLA-B*57:01	Anthem	0.9490	0.8550	0.9560	0.9050	0.8150
	HLAB	0.9399	0.9066	0.9172	0.9119	0.8239
	MixMHCpred-2.0.2	0.9360	0.8670	0.9650	0.9160	0.8350
	NetMHCstabpan-1.00	0.9360	0.8520	0.9520	0.9020	0.8080
	NetMHCpan-4.1	0.9340	0.8850	0.9430	0.9140	0.8300

	NetMHCcons-1.1	0.9340	0.8570	0.9460	0.9010	0.8060
	ACME	0.9310	0.8690	0.9460	0.9080	0.8180
	MHCNetSeq	0.8560	0.9930	0.0550	0.5240	0.1370
HLA-B*57:03	HLAB	0.9722	0.9167	0.9459	0.9315	0.8633
	Anthem	0.9330	0.8280	0.9400	0.8840	0.7750
	NetMHCpan-4.1	0.9250	0.8810	0.9390	0.9100	0.8210
	NetMHCcons-1.1	0.9170	0.8830	0.9410	0.9130	0.8270
	NetMHCstabpan-1.0	0.9170	0.8860	0.9300	0.9090	0.8180
	ACME	0.9120	0.8840	0.9110	0.8970	0.7970
	MHCNetSeq	0.8350	1.0000	0.0700	0.5350	0.1850
HLA-B*58:01	HLAB	0.9810	0.9143	0.9444	0.9296	0.8594
	NetMHCcons-1.1	0.9590	0.9170	0.9680	0.9430	0.8870
	NetMHCstabpan-1.0	0.9590	0.9230	0.9570	0.9400	0.8810
	ACME	0.9570	0.9400	0.9460	0.9430	0.8860
	NetMHCpan-4.1	0.9540	0.9080	0.9600	0.9340	0.8700
	MixMHCpred-2.0.2	0.9460	0.9080	0.9480	0.9290	0.8580
	Anthem	0.9300	0.8350	0.9300	0.8820	0.7680
HLA-C*01:02	HLAB	0.9437	0.9512	0.8095	0.8795	0.7675
	NetMHCcons-1.1	0.9350	0.8920	0.9240	0.9080	0.8180
	NetMHCpan-4.1	0.9320	0.9120	0.8970	0.9050	0.8100
	NetMHCstabpan-1.0	0.9290	0.9020	0.9780	0.9400	0.8830
	Anthem	0.9280	0.8490	0.9200	0.8850	0.7730
	MixMHCpred-2.0.2	0.7850	0.7930	0.7150	0.7540	0.5100
	MHCNetSeq	0.5320	0.7610	0.2390	0.5000	(0.0050)
HLA-C*04:01	HLAB	0.7600	0.6800	0.7308	0.7059	0.4114
	Anthem	0.7260	0.6080	0.7140	0.6610	0.3310
	NetMHCpan-4.1	0.6140	0.5000	0.7240	0.6120	0.2390
	NetMHCstabpan-1.0	0.6080	0.4640	0.7880	0.6260	0.2710
	NetMHCcons-1.1	0.6060	0.5760	0.6720	0.6240	0.2530
	MixMHCpred-2.0.2	0.5730	0.4920	0.7160	0.6040	0.2240
HLA-C*05:01	HLAB	0.9786	1.0000	0.9048	0.9512	0.9069
	Anthem	0.9420	0.8900	0.8640	0.8770	0.7570
	MixMHCpred-2.0.2	0.9340	0.8550	0.9400	0.8970	0.7990
	NetMHCpan-4.1	0.8760	0.8200	0.8750	0.8470	0.6980
	NetMHCstabpan-1.0	0.8550	0.7900	0.8550	0.8230	0.6480
	NetMHCcons-1.1	0.8500	0.7750	0.8800	0.8280	0.6620
HLA-C*06:02	HLAB	0.9074	0.9615	0.6667	0.8113	0.6549
	Anthem	0.7640	0.4920	0.9150	0.7040	0.4530
	MixMHCpred-2.0.2	0.6470	0.5880	0.6500	0.6190	0.2420
	NetMHCcons-1.1	0.5570	0.4430	0.7540	0.5980	0.2150
	NetMHCpan-4.1	0.5470	0.4650	0.6880	0.5770	0.1710
	NetMHCstabpan-1.0	0.5210	0.4540	0.6310	0.5420	0.0870
HLA-C*07:01	NetMHCstabpan-1.0	0.9940	1.0000	0.9780	0.9890	0.9780
	NetMHCcons-1.1	0.9920	0.9970	0.9690	0.9830	0.9680

		HLAB	0.9850	0.9167	0.9730	0.9452	0.8917
		NetMHCpan-4.1	0.9810	0.9420	0.9390	0.9400	0.8810
		Anthem	0.9480	0.8110	0.9380	0.8750	0.7570
		MixMHCpred-2.0.2	0.8850	0.8500	0.7920	0.8210	0.6450
		MHCNetSeq	0.5020	0.6720	0.3080	0.4900	(0.0240)
13	HLA-A*01:01	MixMHCpred-2.0.2	0.9980	0.9860	0.9880	0.9870	0.9740
		Anthem	0.9970	0.9870	0.9720	0.9790	0.9590
		NetMHCcons-1.1	0.9950	0.9680	0.9770	0.9720	0.9450
		NetMHCstabpan-1.0	0.9950	0.9680	0.9710	0.9700	0.9390
		ACME	0.9940	0.9790	0.9760	0.9770	0.9550
		NetMHCpan-4.1	0.9930	0.9620	0.9790	0.9710	0.9410
		HLAB	0.9768	0.9538	0.9540	0.9539	0.9078
	HLA-A*02:01	HLAB	0.9334	0.9211	0.8646	0.8928	0.7869
		Anthem	0.9170	0.8020	0.8940	0.8480	0.7000
		MixMHCpred-2.0.2	0.9000	0.7980	0.9390	0.8680	0.7460
		NetMHCpan-4.1	0.8940	0.7980	0.9150	0.8560	0.7180
		ACME	0.8860	0.7870	0.9110	0.8490	0.7050
		NetMHCstabpan-1.0	0.8830	0.7620	0.9050	0.8340	0.6750
		NetMHCcons-1.1	0.8810	0.7630	0.9050	0.8340	0.6760
		MHCNetSeq	0.8400	0.7580	0.7420	0.7500	0.5000
	HLA-A*03:01	NetMHCpan-4.1	0.9890	0.9660	0.9610	0.9640	0.9290
		ACME	0.9800	0.9440	0.9780	0.9610	0.9230
		NetMHCcons-1.1	0.9770	0.9160	0.9660	0.9410	0.8850
		NetMHCstabpan-1.0	0.9750	0.9160	0.9720	0.9440	0.8910
		HLAB	0.9717	0.9540	0.9432	0.9486	0.8972
		MixMHCpred-2.0.2	0.9500	0.9380	0.9780	0.9580	0.9180
		Anthem	0.9400	0.8890	0.9190	0.9040	0.8120
		MHCNetSeq	0.8980	0.9440	0.7000	0.8220	0.6680
	HLA-A*11:01	HLAB	0.9844	0.9355	0.9683	0.9520	0.9044
		NetMHCstabpan-1.0	0.9260	0.8330	0.9000	0.8670	0.7370
		MixMHCpred-2.0.2	0.9250	0.8110	0.9000	0.8550	0.7190
		NetMHCcons-1.1	0.9230	0.8500	0.8780	0.8640	0.7310
		ACME	0.9100	0.8450	0.8610	0.8530	0.7080
		NetMHCpan-4.1	0.8940	0.7950	0.9330	0.8640	0.7380
		Anthem	0.8880	0.7440	0.9000	0.8220	0.6550
	HLA-A*24:02	MixMHCpred-2.0.2	0.9940	0.9670	0.9690	0.9680	0.9360
		Anthem	0.9800	0.8970	0.9510	0.9240	0.8510
		NetMHCpan-4.1	0.9790	0.9360	0.9510	0.9440	0.8870
		NetMHCstabpan-1.0	0.9790	0.9310	0.9310	0.9310	0.8620
		NetMHCcons-1.1	0.9780	0.9280	0.9330	0.9310	0.8620
		HLAB	0.9759	0.9194	0.9683	0.9440	0.8890
		ACME	0.9420	0.8720	0.9150	0.8940	0.7890
	HLA-A*29:02	MixMHCpred-2.0.2	0.9850	0.9370	0.9710	0.9540	0.9090
		NetMHCcons-1.1	0.9650	0.9210	0.9530	0.9370	0.8760

	NetMHCstabpan-1.0	0.9640	0.9310	0.9340	0.9330	0.8670
	NetMHCpan-4.1	0.9590	0.9260	0.9240	0.9250	0.8500
	ACME	0.9550	0.8950	0.9370	0.9160	0.8330
	Anthem	0.9520	0.8630	0.9800	0.9210	0.8500
	HLAB	0.9501	0.9394	0.9118	0.9254	0.8512
HLA-A*31:01	HLAB	0.9692	0.9600	0.8077	0.8824	0.7749
	MixMHCpred-2.0.2	0.8940	0.8500	0.9000	0.8750	0.7540
	Anthem	0.8890	0.8000	0.8940	0.8470	0.7010
	NetMHCstabpan-1.0	0.8390	0.7860	0.7930	0.7890	0.5800
	NetMHCcons-1.1	0.8370	0.7860	0.8210	0.8030	0.6100
	NetMHCpan-4.1	0.8220	0.7790	0.8790	0.8290	0.6630
	ACME	0.7890	0.7710	0.7430	0.7570	0.5210
HLA-A*68:02	HLAB	0.9207	0.9211	0.7949	0.8571	0.7208
	Anthem	0.6920	0.4170	0.8870	0.6520	0.3500
	MixMHCpred-2.0.2	0.5950	0.4830	0.7520	0.6170	0.2500
	ACME	0.5590	0.4740	0.6910	0.5820	0.1710
	NetMHCstabpan-1.0	0.5500	0.4870	0.7040	0.5960	0.1980
	NetMHCcons-1.1	0.5320	0.5040	0.6700	0.5870	0.1780
	NetMHCpan-4.1	0.5150	0.4170	0.7650	0.5910	0.2080
HLA-B*07:02	MixMHCpred-2.0.2	0.9910	0.9590	0.9590	0.9600	0.9190
	NetMHCpan-4.1	0.9870	0.9460	0.9560	0.9510	0.9020
	ACME	0.9850	0.9470	0.9580	0.9520	0.9050
	NetMHCcons-1.1	0.9840	0.9580	0.9300	0.9440	0.8880
	NetMHCstabpan-1.0	0.9840	0.9550	0.9310	0.9430	0.8860
	Anthem	0.9810	0.8970	0.9690	0.9330	0.8690
	HLAB	0.9774	0.9541	0.9636	0.9589	0.9178
HLA-B*15:01	HLAB	0.9599	0.8701	0.9103	0.8903	0.7812
	Anthem	0.9410	0.8780	0.9490	0.9140	0.8300
	MixMHCpred-2.0.2	0.9380	0.8980	0.9550	0.9270	0.8550
	NetMHCpan-4.1	0.9220	0.8820	0.9510	0.9170	0.8360
	NetMHCcons-1.1	0.9200	0.8590	0.9510	0.9050	0.8140
	NetMHCstabpan-1.0	0.9180	0.8700	0.9350	0.9030	0.8080
	ACME	0.9050	0.8630	0.9390	0.9010	0.8050
	MHCNetSeq	0.8020	1.0000	0.0650	0.5320	0.1800
HLA-B*27:01	HLAB	1.0000	1.0000	1.0000	1.0000	1.0000
	MixMHCpred-2.0.2	0.9870	0.9550	0.9940	0.9750	0.9510
	NetMHCpan-4.1	0.9780	0.9440	0.9890	0.9660	0.9350
	ACME	0.9770	0.9660	0.9440	0.9550	0.9130
	NetMHCcons-1.1	0.9560	0.9380	0.9610	0.9500	0.9010
	NetMHCstabpan-1.0	0.9550	0.9380	0.9550	0.9470	0.8960
	Anthem	0.9430	0.8220	0.9820	0.9020	0.8170
HLA-B*27:02	MixMHCpred-2.0.2	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCpan-4.1	0.9950	0.9930	0.9780	0.9850	0.9710
	NetMHCcons-1.1	0.9950	0.9740	0.9740	0.9740	0.9490

	NetMHCstabpan-1.0	0.9950	0.9700	0.9700	0.9700	0.9410
	HLAB	0.9917	1.0000	0.9500	0.9748	0.9508
	ACME	0.9910	0.9890	0.9670	0.9780	0.9560
	Anthem	0.9900	0.9040	0.9650	0.9340	0.8710
HLA-B*27:05	Anthem	0.8110	0.6990	0.7670	0.7320	0.4660
	HLAB	0.8016	0.8770	0.6088	0.7428	0.5042
	MixMHCpred-2.0.2	0.6950	0.5960	0.6810	0.6380	0.2790
	NetMHCstabpan-1.0	0.6230	0.5190	0.6550	0.5870	0.1750
	NetMHCcons-1.1	0.6190	0.5170	0.6450	0.5810	0.1640
	MHCNetSeq	0.6110	0.9600	0.0640	0.5130	0.0550
	NetMHCpan-4.1	0.5950	0.4710	0.6710	0.5710	0.1470
	ACME	0.5830	0.5020	0.6300	0.5660	0.1350
HLA-B*27:08	NetMHCpan-4.1	1.0000	1.0000	1.0000	1.0000	1.0000
	NetMHCcons-1.1	1.0000	1.0000	0.9930	0.9970	0.9940
	NetMHCstabpan-1.0	1.0000	1.0000	0.9930	0.9970	0.9940
	ACME	0.9960	1.0000	0.9870	0.9930	0.9870
	MixMHCpred-2.0.2	0.9940	1.0000	0.9930	0.9970	0.9940
	Anthem	0.9930	0.9070	0.9760	0.9410	0.8850
	HLAB	0.9328	0.9063	0.9394	0.9231	0.8464
HLA-B*27:09	HLAB	0.9474	0.9016	0.8710	0.8862	0.7728
	Anthem	0.7600	0.6060	0.8510	0.7280	0.4760
	MixMHCpred-2.0.2	0.6790	0.5840	0.8500	0.7160	0.4530
	NetMHCcons-1.1	0.6420	0.5560	0.8860	0.7210	0.4690
	NetMHCstabpan-1.0	0.6420	0.5560	0.8920	0.7230	0.4760
	NetMHCpan-4.1	0.6270	0.5500	0.8670	0.7080	0.4410
	ACME	0.5930	0.5140	0.8420	0.6780	0.3780
HLA-B*35:01	HLAB	0.9437	0.8333	0.9189	0.8767	0.7557
	MixMHCpred-2.0.2	0.8510	0.7830	0.7880	0.7850	0.5750
	Anthem	0.8370	0.6350	0.8930	0.7640	0.5510
	MHCNetSeq	0.7570	0.9470	0.3410	0.6440	0.3560
	NetMHCcons-1.1	0.7010	0.6770	0.6880	0.6820	0.3720
	ACME	0.6900	0.6470	0.6880	0.6670	0.3450
	NetMHCstabpan-1.0	0.6810	0.6230	0.7060	0.6650	0.3380
	NetMHCpan-4.1	0.5760	0.5880	0.6060	0.5970	0.2050
HLA-B*44:02	HLAB	0.9925	0.9385	0.9848	0.9618	0.9246
	Anthem	0.9630	0.9430	0.9500	0.9470	0.8950
	NetMHCpan-4.1	0.9550	0.9520	0.9860	0.9690	0.9390
	ACME	0.9540	0.9520	0.9900	0.9710	0.9430
	MixMHCpred-2.0.2	0.9530	0.9520	0.9950	0.9740	0.9480
	NetMHCcons-1.1	0.9530	0.9520	0.9810	0.9660	0.9340
	NetMHCstabpan-1.0	0.9530	0.9520	0.9760	0.9640	0.9290
HLA-B*51:01	HLAB	0.8987	0.8732	0.8056	0.8392	0.6801
	MixMHCpred-2.0.2	0.8590	0.7750	0.8350	0.8050	0.6150
	NetMHCcons-1.1	0.8450	0.8200	0.8150	0.8180	0.6370

		NetMHCpan-4.1	0.8380	0.7750	0.8550	0.8150	0.6330
		NetMHCstabpan-1.0	0.8360	0.7750	0.8600	0.8180	0.6410
		Anthem	0.8250	0.6200	0.8610	0.7400	0.5010
		ACME	0.7700	0.7700	0.7000	0.7350	0.4760
	HLA-B*57:01	HLAB	0.9399	0.9066	0.9172	0.9119	0.8239
		Anthem	0.9030	0.7140	0.9480	0.8310	0.6820
		MixMHCpred-2.0.2	0.8820	0.7830	0.8700	0.8260	0.6560
		NetMHCstabpan-1.0	0.8730	0.7540	0.8310	0.7930	0.5910
		NetMHCcons-1.1	0.8640	0.7090	0.8920	0.8010	0.6130
		ACME	0.8620	0.7310	0.8780	0.8040	0.6170
		NetMHCpan-4.1	0.8550	0.7330	0.8790	0.8060	0.6180
	HLA-B*57:03	HLAB	0.9722	0.9167	0.9459	0.9315	0.8633
		Anthem	0.9560	0.8000	0.9580	0.8790	0.7700
		NetMHCstabpan-1.0	0.9300	0.8500	1.0000	0.9250	0.8600
		NetMHCcons-1.1	0.9290	0.8550	0.9900	0.9230	0.8540
		NetMHCpan-4.1	0.9100	0.8500	1.0000	0.9250	0.8600
		ACME	0.8960	0.8500	0.9850	0.9180	0.8440
	HLA-B*58:01	HLAB	0.9810	0.9143	0.9444	0.9296	0.8594
		ACME	0.8410	0.7440	0.8610	0.8030	0.6140
		NetMHCstabpan-1.0	0.8370	0.7000	0.8780	0.7890	0.5910
		NetMHCcons-1.1	0.8360	0.7110	0.8550	0.7840	0.5750
		NetMHCpan-4.1	0.8280	0.7000	0.8610	0.7810	0.5760
		Anthem	0.7780	0.5450	0.9500	0.7470	0.5430
		MixMHCpred-2.0.2	0.7510	0.6390	0.8890	0.7640	0.5470
	HLA-C*04:01	HLAB	0.7600	0.6800	0.7308	0.7059	0.4114
		Anthem	0.7460	0.5640	0.8420	0.7030	0.4300
		MixMHCpred-2.0.2	0.5790	0.6270	0.5860	0.6070	0.2180
		NetMHCstabpan-1.0	0.5540	0.4050	0.6090	0.5070	0.0150
		NetMHCpan-4.1	0.5450	0.3500	0.7140	0.5320	0.0780
		NetMHCcons-1.1	0.5210	0.4640	0.5860	0.5250	0.0510
	HLA-C*05:01	HLAB	0.9786	1.0000	0.9048	0.9512	0.9069
		MixMHCpred-2.0.2	0.8380	0.7730	0.8870	0.8300	0.6660
		Anthem	0.7760	0.4930	0.8230	0.6580	0.3440
		NetMHCcons-1.1	0.7760	0.8070	0.7270	0.7670	0.5420
		NetMHCpan-4.1	0.7720	0.7200	0.7400	0.7300	0.4620
		NetMHCstabpan-1.0	0.7610	0.7800	0.7000	0.7400	0.4840
	HLA-C*06:02	HLAB	0.9074	0.9615	0.6667	0.8113	0.6549
		Anthem	0.6180	0.3400	0.8100	0.5750	0.1750
		NetMHCstabpan-1.0	0.5900	0.5770	0.6200	0.5980	0.1980
		NetMHCcons-1.1	0.5710	0.5400	0.6730	0.6070	0.2170
		NetMHCpan-4.1	0.5650	0.6370	0.5070	0.5720	0.1450
		MixMHCpred-2.0.2	0.5210	0.5000	0.6270	0.5630	0.1340
14	HLA-A*01:01	HLAB	0.9988	0.9727	0.9910	0.9819	0.9640
		MixMHCpred-2.0.2	0.9950	0.9800	0.9840	0.9820	0.9650

	NetMHCpan-4.1	0.9940	0.9800	0.9800	0.9800	0.9610
	NetMHCcons-1.1	0.9930	0.9670	0.9800	0.9740	0.9470
	ACME	0.9930	0.9680	0.9740	0.9720	0.9430
	NetMHCstabpan-1.0	0.9920	0.9690	0.9720	0.9710	0.9410
	Anthem	0.9860	0.9370	0.9740	0.9560	0.9130
HLA-A*02:01	HLAB	0.9567	0.9053	0.9167	0.9110	0.8220
	MixMHCpred-2.0.2	0.9350	0.8430	0.9180	0.8800	0.7640
	NetMHCcons-1.1	0.9240	0.8450	0.8920	0.8690	0.7390
	NetMHCstabpan-1.0	0.9230	0.8390	0.8940	0.8660	0.7350
	Anthem	0.9100	0.8000	0.8990	0.8500	0.7050
	NetMHCpan-4.1	0.9060	0.8120	0.9000	0.8560	0.7150
	ACME	0.8980	0.8160	0.8570	0.8360	0.6740
	MHCNetSeq	0.8660	0.8200	0.7670	0.7930	0.5890
HLA-A*24:02	HLAB	0.9872	0.9744	0.8000	0.8861	0.7850
	NetMHCcons-1.1	0.9860	0.9810	0.9560	0.9690	0.9390
	MixMHCpred-2.0.2	0.9820	0.9250	0.9810	0.9530	0.9080
	NetMHCstabpan-1.0	0.9820	0.9750	0.9440	0.9600	0.9190
	NetMHCpan-4.1	0.9800	0.9940	0.9250	0.9600	0.9220
	Anthem	0.9400	0.9000	0.9380	0.9190	0.8410
	ACME	0.9270	0.8810	0.9130	0.8970	0.7940
HLA-A*68:02	HLAB	0.8913	0.8261	0.6667	0.7447	0.4982
	Anthem	0.7780	0.5110	0.8720	0.6920	0.4180
	ACME	0.7100	0.6950	0.6950	0.6950	0.3940
	NetMHCstabpan-1.0	0.6650	0.6280	0.6280	0.6280	0.2590
	NetMHCpan-4.1	0.6540	0.6560	0.6170	0.6360	0.2810
	NetMHCcons-1.1	0.6260	0.6000	0.6500	0.6250	0.2580
	MixMHCpred-2.0.2	0.6200	0.6330	0.6000	0.6170	0.2370
HLA-B*07:02	HLAB	0.9964	0.8906	0.9846	0.9380	0.8797
	NetMHCcons-1.1	0.9760	0.9630	0.9430	0.9530	0.9060
	ACME	0.9750	0.9450	0.9480	0.9470	0.8950
	NetMHCpan-4.1	0.9730	0.9710	0.9710	0.9710	0.9430
	NetMHCstabpan-1.0	0.9730	0.9630	0.9370	0.9500	0.9010
	MixMHCpred-2.0.2	0.9680	0.9280	0.9510	0.9400	0.8810
	Anthem	0.9430	0.8520	0.9540	0.9030	0.8110
HLA-B*15:01	MixMHCpred-2.0.2	0.9500	0.9190	0.9220	0.9200	0.8410
	NetMHCcons-1.1	0.9370	0.8780	0.9280	0.9030	0.8080
	NetMHCstabpan-1.0	0.9370	0.8720	0.9100	0.8910	0.7820
	Anthem	0.9360	0.8500	0.9430	0.8970	0.7980
	ACME	0.9340	0.8880	0.8780	0.8830	0.7680
	NetMHCpan-4.1	0.9330	0.8940	0.9220	0.9080	0.8160
	HLAB	0.9123	0.8824	0.8654	0.8738	0.7477
	MHCNetSeq	0.8550	0.9690	0.3840	0.6770	0.4320
HLA-B*27:05	Anthem	0.8240	0.7530	0.7560	0.7540	0.5090
	HLAB	0.8225	0.7431	0.7416	0.7423	0.4847

	MixMHCpred-2.0.2	0.6600	0.5710	0.6840	0.6270	0.2570
	NetMHCstabpan-1.00	0.5330	0.4860	0.5870	0.5360	0.0730
	NetMHCcons-1.1	0.5290	0.4780	0.5950	0.5360	0.0730
	MHCNetSeq	0.5230	0.9530	0.0530	0.5030	0.0130
	NetMHCpan-4.1	0.5200	0.4560	0.5320	0.4940	(0.0120)
	ACME	0.5180	0.4330	0.5690	0.5010	0.0020
HLA-B*27:09	HLAB	0.9182	0.8333	0.7838	0.8082	0.6176
	Anthem	0.8380	0.6720	0.9010	0.7860	0.5910
	MixMHCpred-2.0.2	0.7600	0.6800	0.8080	0.7440	0.4970
	NetMHCcons-1.1	0.6140	0.6040	0.6320	0.6180	0.2400
	NetMHCstabpan-1.00	0.6130	0.6160	0.6240	0.6200	0.2450
	NetMHCpan-4.1	0.5500	0.4600	0.7320	0.5960	0.2030
	ACME	0.5490	0.5560	0.5880	0.5720	0.1450
HLA-B*35:01	HLAB	0.9346	0.9412	0.7778	0.8571	0.7261
	Anthem	0.8310	0.5330	0.8870	0.7100	0.4570
	MHCNetSeq	0.7460	0.9660	0.3000	0.6330	0.3600
	MixMHCpred-2.0.2	0.5860	0.7730	0.5330	0.6530	0.3190
	NetMHCstabpan-1.00	0.5260	0.6530	0.5330	0.5930	0.1950
	ACME	0.5240	0.4400	0.7800	0.6100	0.2380
	NetMHCpan-4.1	0.5210	0.6200	0.5000	0.5600	0.1230
	NetMHCcons-1.1	0.5020	0.7600	0.4470	0.6030	0.2250
HLA-B*57:01	HLAB	0.9810	0.9000	0.9524	0.9268	0.8544
	Anthem	0.8200	0.6050	0.8660	0.7360	0.4890
	MixMHCpred-2.0.2	0.7490	0.6310	0.8190	0.7250	0.4600
	NetMHCpan-4.1	0.7340	0.6430	0.7220	0.6830	0.3670
	NetMHCcons-1.1	0.7060	0.5670	0.7710	0.6690	0.3470
	NetMHCstabpan-1.00	0.7030	0.6010	0.7200	0.6610	0.3250
	ACME	0.7030	0.5280	0.8480	0.6880	0.3980
HLA-C*04:01	HLAB	0.8123	0.5909	0.8696	0.7333	0.4809
	Anthem	0.7800	0.4210	0.8910	0.6560	0.3590
	NetMHCpan-4.1	0.6040	0.4530	0.6000	0.5260	0.0780
	NetMHCcons-1.1	0.6020	0.5580	0.4260	0.4920	(0.0160)
	NetMHCstabpan-1.00	0.5870	0.4950	0.4950	0.4950	(0.0110)
	MixMHCpred-2.0.2	0.5610	0.5740	0.6580	0.6160	0.2350
HLA-C*05:01	HLAB	0.9583	0.8667	0.8750	0.8710	0.7417
	Anthem	0.6220	0.3880	0.8900	0.6390	0.3340
	NetMHCpan-4.1	0.5470	0.4810	0.7380	0.6090	0.2380
	MixMHCpred-2.0.2	0.5300	0.7060	0.4880	0.5970	0.2090
	NetMHCstabpan-1.00	0.5250	0.4320	0.7690	0.6000	0.2190
	NetMHCcons-1.1	0.5030	0.4440	0.7250	0.5850	0.1880
HLA-C*06:02	HLAB	0.8129	0.1333	1.0000	0.5738	0.2693
	Anthem	0.7340	0.5170	0.8020	0.6590	0.3360
	NetMHCpan-4.1	0.5210	0.5420	0.5690	0.5560	0.1150
	NetMHCcons-1.1	0.5210	0.5000	0.5420	0.5210	0.0430

MixMHCpred-2.0.2	0.5100	0.4560	0.6280	0.5420	0.0870
MHCNetSeq	0.5070	0.9440	0.0810	0.5120	0.0380
NetMHCstabpan-1.0	0.5050	0.5530	0.5300	0.5420	0.0840

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