

Binding affinities of 438 HLA Class I and II proteins to the complete proteomes of seven (potentially) pandemic viruses and distributions of strongest and weakest HLA peptide binders in human populations worldwide

Supplementary material 6

Extended results for the binding predictions for A/H7N9

Table of Contents

TOTAL NUMBER OF PEPTIDES WITH STRONG, REGULAR AND WEAK BINDING PREDICTIONS FOR <i>HLA-A</i>	2
GENERAL BINDING PREDICTION TENDENCIES FOR <i>HLA-A</i>	4
<i>HLA-A</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH STRONG BINDING PREDICTION	5
<i>HLA-A</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH REGULAR BINDING PREDICTION.....	6
<i>HLA-A</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH WEAK BINDING PREDICTION.....	7
TOTAL NUMBER OF PEPTIDES WITH STRONG, REGULAR AND WEAK BINDING PREDICTIONS FOR <i>HLA-B</i>	8
GENERAL BINDING PREDICTION TENDENCIES FOR <i>HLA-B</i>	11
<i>HLA-B</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH STRONG BINDING PREDICTION	12
<i>HLA-B</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH REGULAR BINDING PREDICTION.....	13
<i>HLA-B</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH WEAK BINDING PREDICTION.....	14
TOTAL NUMBER OF PEPTIDES WITH STRONG, REGULAR AND WEAK BINDING PREDICTIONS FOR <i>HLA-C</i>	15
GENERAL BINDING PREDICTION TENDENCIES FOR <i>HLA-C</i>	16
<i>HLA-C</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH STRONG BINDING PREDICTION	17
<i>HLA-C</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH REGULAR BINDING PREDICTION.....	18
<i>HLA-C</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH WEAK BINDING PREDICTION	19
TOTAL NUMBER OF PEPTIDES WITH STRONG, REGULAR AND WEAK BINDING PREDICTIONS FOR <i>HLA-DRB1</i>	20
GENERAL BINDING PREDICTION TENDENCIES FOR <i>HLA-DRB1</i>	22
<i>HLA-DRB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH STRONG BINDING PREDICTION	23
<i>HLA-DRB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH REGULAR BINDING PREDICTION	24
<i>HLA-DRB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH WEAK BINDING PREDICTION	25
TOTAL NUMBER OF PEPTIDES WITH STRONG, REGULAR AND WEAK BINDING PREDICTIONS FOR <i>HLA-DQA1/-DQB1</i>	26
GENERAL BINDING PREDICTION TENDENCIES FOR <i>HLA-DQA1/-DQB1</i>	27
<i>HLA-DQA1/-DQB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH STRONG BINDING PREDICTION	28
<i>HLA-DQA1/-DQB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH REGULAR BINDING PREDICTION....	29
<i>HLA-DQA1/-DQB1</i> ALLELES ORDERED BY NUMBER OF PRESENTED PEPTIDES WITH WEAK BINDING PREDICTION	30

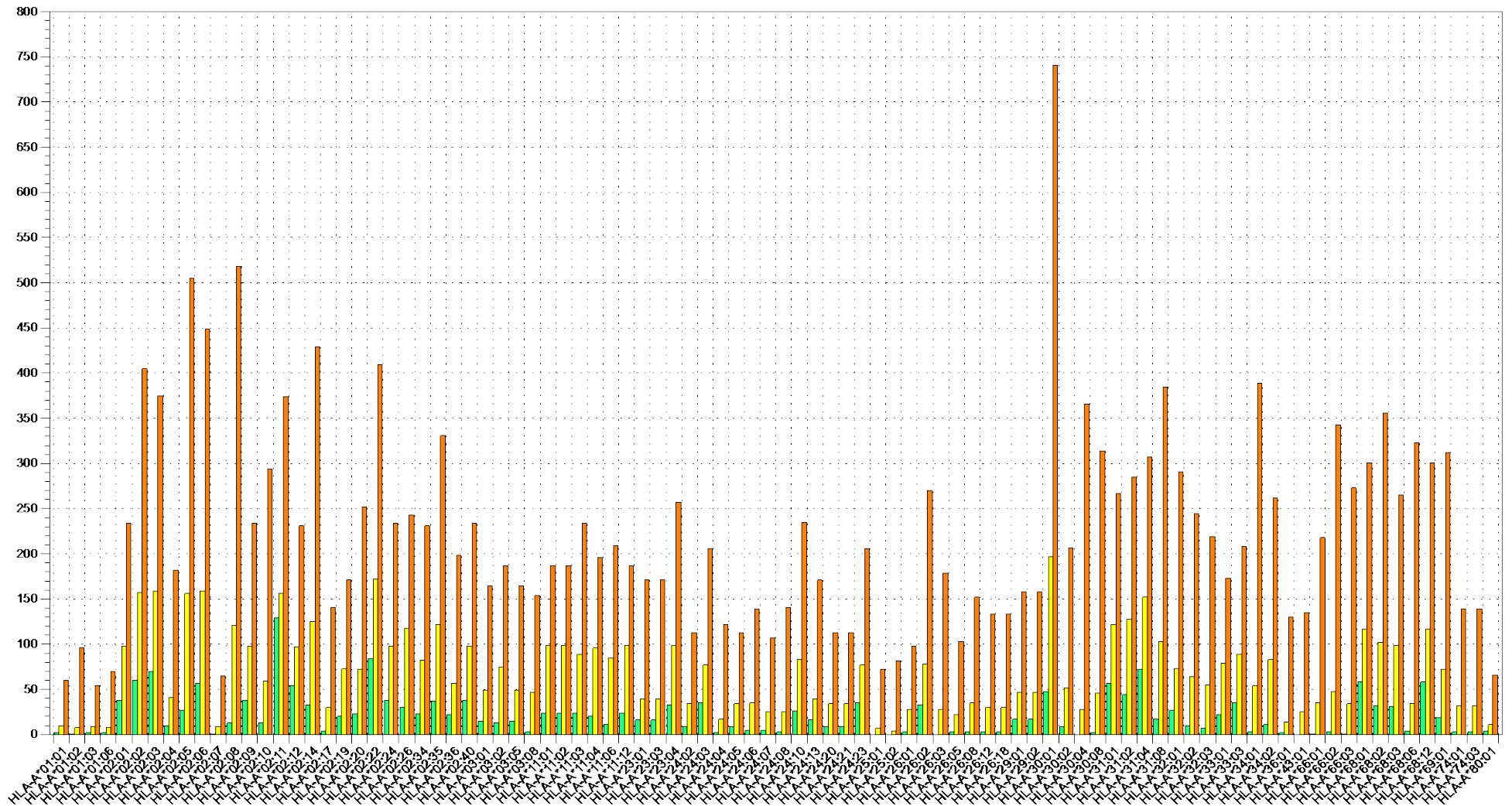
Total number of peptides with strong, regular and weak binding predictions for *HLA-A*

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-A*01:01	2	10	60	4379
HLA-A*01:02	1	8	96	4346
HLA-A*01:03	2	9	54	4386
HLA-A*01:06	2	8	70	4371
HLA-A*02:01	38	98	234	4081
HLA-A*02:02	60	157	405	3829
HLA-A*02:03	70	159	375	3847
HLA-A*02:04	10	41	182	4218
HLA-A*02:05	27	156	505	3763
HLA-A*02:06	57	159	449	3786
HLA-A*02:07	1	9	65	4376
HLA-A*02:08	13	121	518	3799
HLA-A*02:09	38	98	234	4081
HLA-A*02:10	13	59	294	4085
HLA-A*02:11	129	156	374	3792
HLA-A*02:12	54	97	231	4069
HLA-A*02:14	33	125	429	3864
HLA-A*02:17	4	30	141	4276
HLA-A*02:19	20	73	171	4187
HLA-A*02:20	23	72	252	4104
HLA-A*02:22	84	172	409	3786
HLA-A*02:24	38	98	234	4081
HLA-A*02:26	30	118	243	4060
HLA-A*02:34	23	82	231	4115
HLA-A*02:35	37	122	331	3961
HLA-A*02:36	22	57	198	4174
HLA-A*02:40	38	98	234	4081
HLA-A*03:01	15	49	165	4222
HLA-A*03:02	13	75	187	4176
HLA-A*03:05	15	49	165	4222
HLA-A*03:08	3	47	154	4247
HLA-A*11:01	24	99	187	4141
HLA-A*11:02	24	99	187	4141
HLA-A*11:03	24	89	234	4104
HLA-A*11:04	20	96	196	4139
HLA-A*11:06	11	85	209	4146
HLA-A*11:12	24	99	187	4141
HLA-A*23:01	16	39	171	4225
HLA-A*23:03	16	39	171	4225
HLA-A*23:04	33	99	257	4062
HLA-A*24:02	9	34	113	4295
HLA-A*24:03	35	77	206	4133
HLA-A*24:04	2	17	122	4310
HLA-A*24:05	9	34	113	4295
HLA-A*24:06	5	35	139	4272
HLA-A*24:07	5	25	107	4314
HLA-A*24:08	3	25	141	4282
HLA-A*24:10	26	83	235	4107
HLA-A*24:13	16	39	171	4225
HLA-A*24:20	9	34	113	4295
HLA-A*24:21	9	34	113	4295
HLA-A*24:23	35	77	206	4133
HLA-A*25:01	0	7	72	4372
HLA-A*25:02	0	4	81	4366
HLA-A*26:01	3	28	98	4322
HLA-A*26:02	33	78	270	4070
HLA-A*26:03	0	28	179	4244
HLA-A*26:05	3	22	103	4323
HLA-A*26:08	3	35	152	4261
HLA-A*26:12	3	30	133	4285
HLA-A*26:18	3	30	133	4285
HLA-A*29:01	17	47	158	4229

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-A*29:02	17	47	158	4229
HLA-A*30:01	48	197	741	3465
HLA-A*30:02	9	52	207	4183
HLA-A*30:04	0	28	366	4057
HLA-A*30:08	2	46	314	4089
HLA-A*31:01	57	122	267	4005
HLA-A*31:02	44	128	285	3994
HLA-A*31:04	72	152	307	3920
HLA-A*31:08	17	103	385	3946
HLA-A*32:01	27	73	291	4060
HLA-A*32:02	10	64	245	4132
HLA-A*32:03	7	55	219	4170
HLA-A*33:01	22	79	173	4177
HLA-A*33:03	35	89	208	4119
HLA-A*34:01	3	54	389	4005
HLA-A*34:02	11	83	262	4095
HLA-A*36:01	2	14	130	4305
HLA-A*43:01	0	25	135	4291
HLA-A*66:01	1	35	218	4197
HLA-A*66:02	3	48	343	4057
HLA-A*66:03	1	34	273	4143
HLA-A*68:01	58	117	301	3975
HLA-A*68:02	32	102	356	3961
HLA-A*68:03	31	99	265	4056
HLA-A*68:06	4	34	323	4090
HLA-A*68:12	58	117	301	3975
HLA-A*69:01	19	72	312	4048
HLA-A*74:01	3	32	139	4277
HLA-A*74:03	3	32	139	4277
HLA-A*80:01	4	11	66	4370

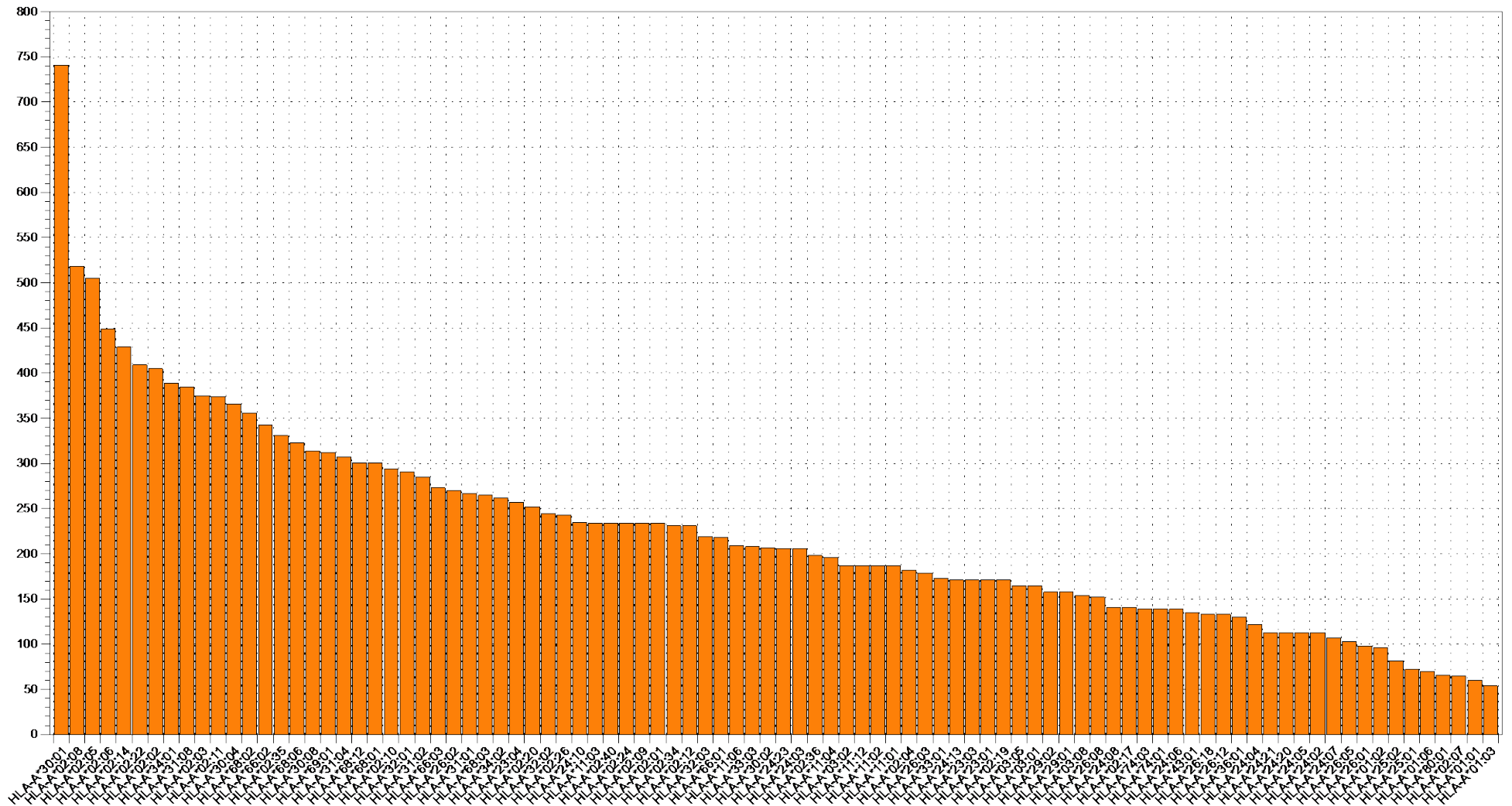
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-A*



Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 500$ nM) and weak (500 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-A alleles ordered by number of presented peptides with weak binding prediction



Total number of peptides with strong, regular and weak binding predictions for *HLA-B*

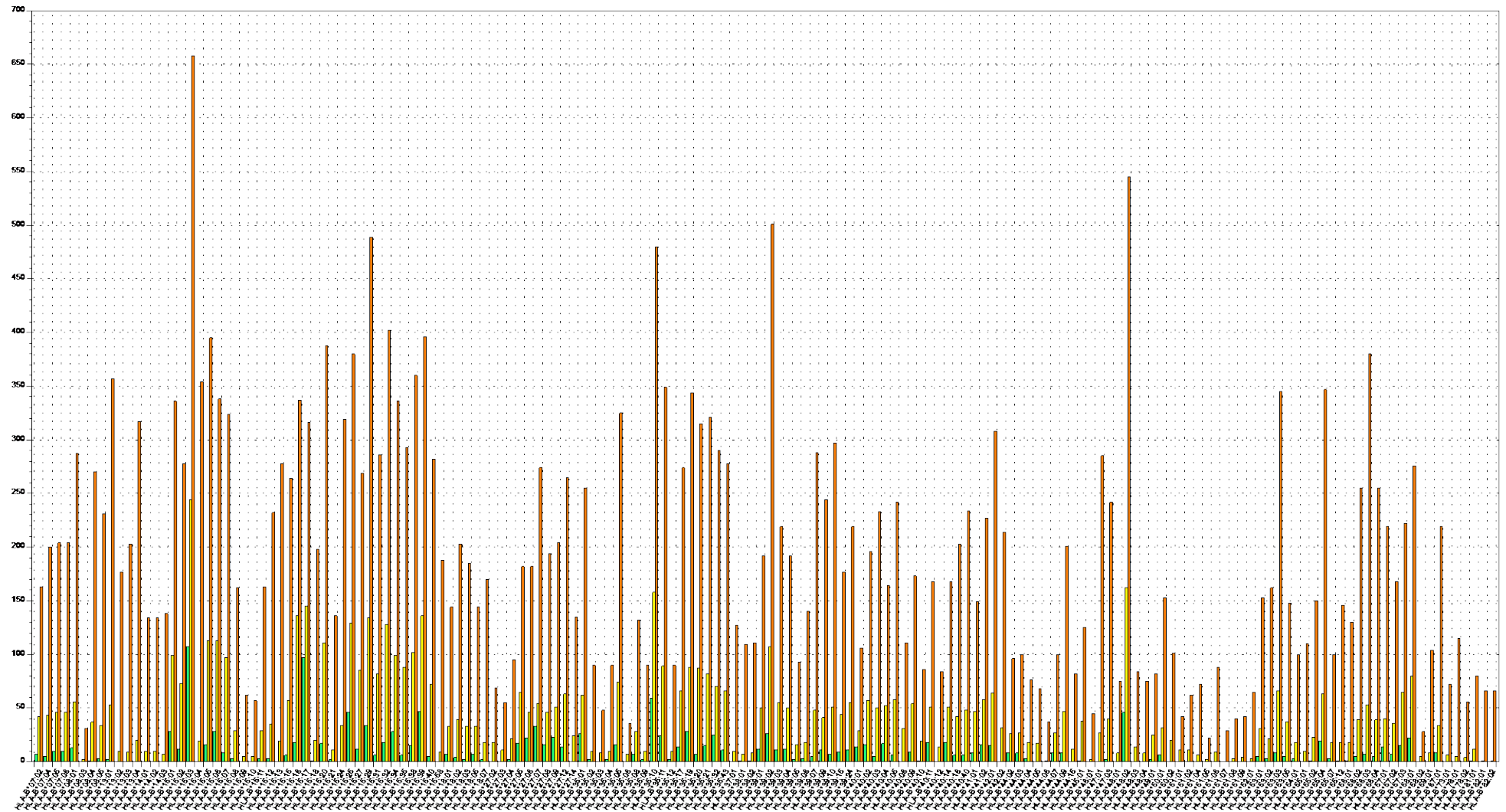
	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-B*07:02	7	42	163	4239
HLA-B*07:04	5	43	200	4203
HLA-B*07:05	10	46	204	4191
HLA-B*07:06	10	46	204	4191
HLA-B*08:01	13	56	287	4095
HLA-B*08:03	0	2	31	4418
HLA-B*08:04	1	37	270	4143
HLA-B*08:05	3	34	231	4183
HLA-B*13:01	2	53	357	4039
HLA-B*13:02	0	10	177	4264
HLA-B*13:03	0	9	203	4239
HLA-B*13:04	0	20	317	4114
HLA-B*14:01	0	10	134	4307
HLA-B*14:02	0	10	134	4307
HLA-B*14:03	0	7	138	4306
HLA-B*15:01	28	99	336	3988
HLA-B*15:02	12	73	278	4088
HLA-B*15:03	107	244	658	3442
HLA-B*15:04	0	19	354	4078
HLA-B*15:05	16	113	395	3927
HLA-B*15:06	28	113	338	3972
HLA-B*15:07	8	97	324	4022
HLA-B*15:08	3	29	162	4257
HLA-B*15:09	0	5	62	4384
HLA-B*15:10	0	5	57	4389
HLA-B*15:11	3	29	163	4256
HLA-B*15:12	3	35	232	4181
HLA-B*15:13	0	19	278	4154
HLA-B*15:15	6	57	264	4124
HLA-B*15:16	18	136	337	3960
HLA-B*15:17	97	145	316	3893
HLA-B*15:18	1	20	198	4232
HLA-B*15:20	17	111	388	3935
HLA-B*15:21	2	11	136	4302
HLA-B*15:24	0	34	319	4098
HLA-B*15:25	46	129	380	3896
HLA-B*15:27	12	85	269	4085
HLA-B*15:29	34	134	489	3794
HLA-B*15:31	6	82	286	4077
HLA-B*15:32	18	128	402	3903
HLA-B*15:34	28	99	336	3988
HLA-B*15:35	6	88	293	4064
HLA-B*15:38	15	102	360	3974
HLA-B*15:39	47	136	396	3872
HLA-B*15:40	5	72	282	4092
HLA-B*15:58	0	9	188	4254
HLA-B*18:01	7	33	144	4267
HLA-B*18:02	4	39	203	4205
HLA-B*18:03	2	33	185	4231
HLA-B*18:05	7	33	144	4267
HLA-B*18:07	2	18	170	4261
HLA-B*27:02	0	18	69	4364
HLA-B*27:03	0	11	55	4385
HLA-B*27:04	2	21	95	4333
HLA-B*27:05	17	65	182	4187
HLA-B*27:06	22	46	182	4201
HLA-B*27:07	33	54	274	4090
HLA-B*27:08	16	46	194	4195
HLA-B*27:09	23	51	204	4173
HLA-B*27:12	14	63	265	4109
HLA-B*27:14	0	24	135	4292
HLA-B*35:01	26	62	255	4108

	IC ₅₀ ≤ 50 nM Strong binders	50 nM < IC ₅₀ ≤ 500 nM Regular binders	500 nM < IC ₅₀ ≤ 5000 nM Weak binders	IC ₅₀ > 5000 nM Non binders
HLA-B*35:02	2	10	90	4349
HLA-B*35:03	0	8	48	4395
HLA-B*35:04	2	10	90	4349
HLA-B*35:05	16	74	325	4036
HLA-B*35:06	0	7	36	4408
HLA-B*35:08	7	28	132	4284
HLA-B*35:09	2	10	90	4349
HLA-B*35:10	59	158	480	3754
HLA-B*35:11	24	89	349	3989
HLA-B*35:12	2	10	90	4349
HLA-B*35:17	14	66	274	4097
HLA-B*35:19	28	88	344	3991
HLA-B*35:20	7	87	315	4042
HLA-B*35:21	15	82	321	4033
HLA-B*35:32	25	70	290	4066
HLA-B*35:43	11	66	278	4096
HLA-B*37:01	0	10	127	4314
HLA-B*38:01	1	7	109	4334
HLA-B*38:02	1	8	111	4331
HLA-B*39:01	12	50	192	4197
HLA-B*39:02	26	107	501	3817
HLA-B*39:03	11	55	219	4166
HLA-B*39:04	12	50	192	4197
HLA-B*39:05	2	16	93	4340
HLA-B*39:06	3	18	140	4290
HLA-B*39:07	5	48	288	4110
HLA-B*39:09	11	41	244	4155
HLA-B*39:10	7	51	297	4096
HLA-B*39:15	9	44	177	4221
HLA-B*39:24	11	55	219	4166
HLA-B*40:01	14	29	106	4302
HLA-B*40:02	16	57	196	4182
HLA-B*40:03	5	50	233	4163
HLA-B*40:04	17	52	164	4218
HLA-B*40:05	6	58	242	4145
HLA-B*40:06	0	31	111	4309
HLA-B*40:09	9	54	173	4215
HLA-B*40:10	1	19	86	4345
HLA-B*40:11	18	51	168	4214
HLA-B*40:12	0	14	84	4353
HLA-B*40:14	18	51	168	4214
HLA-B*40:16	6	42	203	4200
HLA-B*40:40	6	48	234	4163
HLA-B*41:01	8	47	149	4247
HLA-B*41:02	16	58	227	4150
HLA-B*42:01	15	64	308	4064
HLA-B*42:02	0	32	214	4205
HLA-B*44:02	8	26	96	4321
HLA-B*44:03	8	27	100	4316
HLA-B*44:04	3	18	76	4354
HLA-B*44:05	0	17	68	4366
HLA-B*44:06	0	1	37	4413
HLA-B*44:07	8	27	100	4316
HLA-B*44:09	8	47	201	4195
HLA-B*44:15	0	12	82	4357
HLA-B*45:01	1	38	125	4287
HLA-B*46:01	0	2	45	4404
HLA-B*47:01	0	27	285	4139
HLA-B*47:03	2	40	242	4167
HLA-B*48:01	0	8	75	4368
HLA-B*48:02	46	162	545	3698
HLA-B*48:03	0	14	84	4353
HLA-B*48:04	0	8	75	4368
HLA-B*49:01	2	25	82	4342
HLA-B*50:01	6	32	153	4260

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-B*50:02	0	20	101	4330
HLA-B*51:01	0	11	42	4398
HLA-B*51:02	0	11	62	4378
HLA-B*51:04	0	6	72	4373
HLA-B*51:05	0	2	22	4427
HLA-B*51:06	0	9	88	4354
HLA-B*51:07	0	0	29	4422
HLA-B*51:08	0	3	40	4408
HLA-B*51:09	0	4	42	4405
HLA-B*52:01	0	3	65	4383
HLA-B*53:01	5	31	153	4262
HLA-B*53:02	3	21	162	4265
HLA-B*53:03	8	66	345	4032
HLA-B*53:05	5	37	148	4261
HLA-B*54:01	3	18	100	4330
HLA-B*55:01	0	10	110	4331
HLA-B*55:02	1	23	150	4277
HLA-B*55:04	19	63	347	4022
HLA-B*55:07	3	18	100	4330
HLA-B*55:12	1	18	146	4286
HLA-B*56:01	1	18	130	4302
HLA-B*56:02	5	39	255	4152
HLA-B*56:03	7	53	380	4011
HLA-B*56:04	5	39	255	4152
HLA-B*57:01	14	40	219	4178
HLA-B*57:02	7	36	168	4240
HLA-B*57:03	15	65	222	4149
HLA-B*58:01	22	80	276	4073
HLA-B*58:02	0	5	28	4418
HLA-B*59:01	0	8	104	4339
HLA-B*67:01	8	34	219	4190
HLA-B*73:01	0	6	72	4373
HLA-B*78:01	0	5	115	4331
HLA-B*78:02	0	4	56	4391
HLA-B*81:01	1	12	80	4358
HLA-B*82:01	0	1	66	4384
HLA-B*82:02	0	1	66	4384

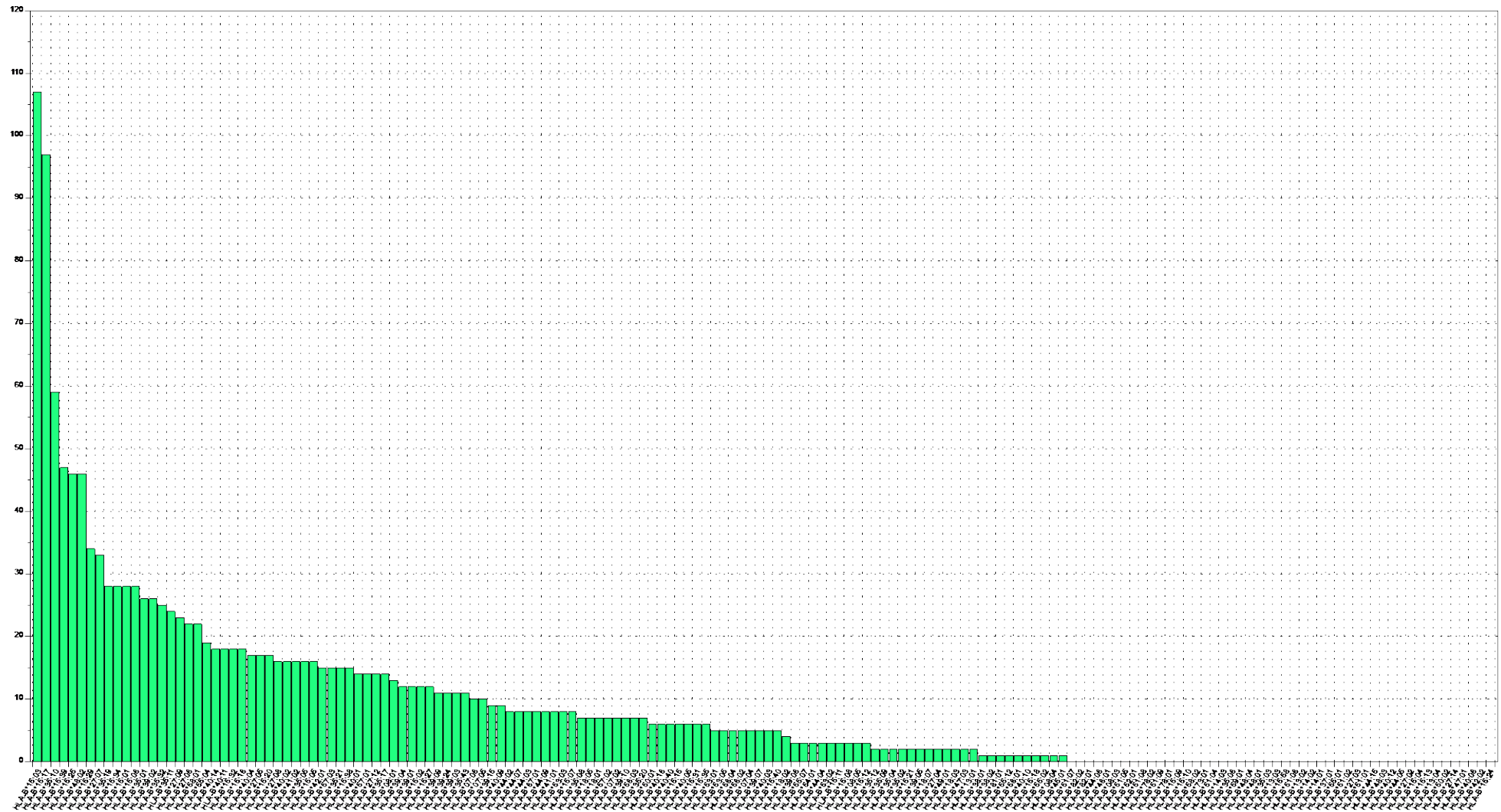
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-B*

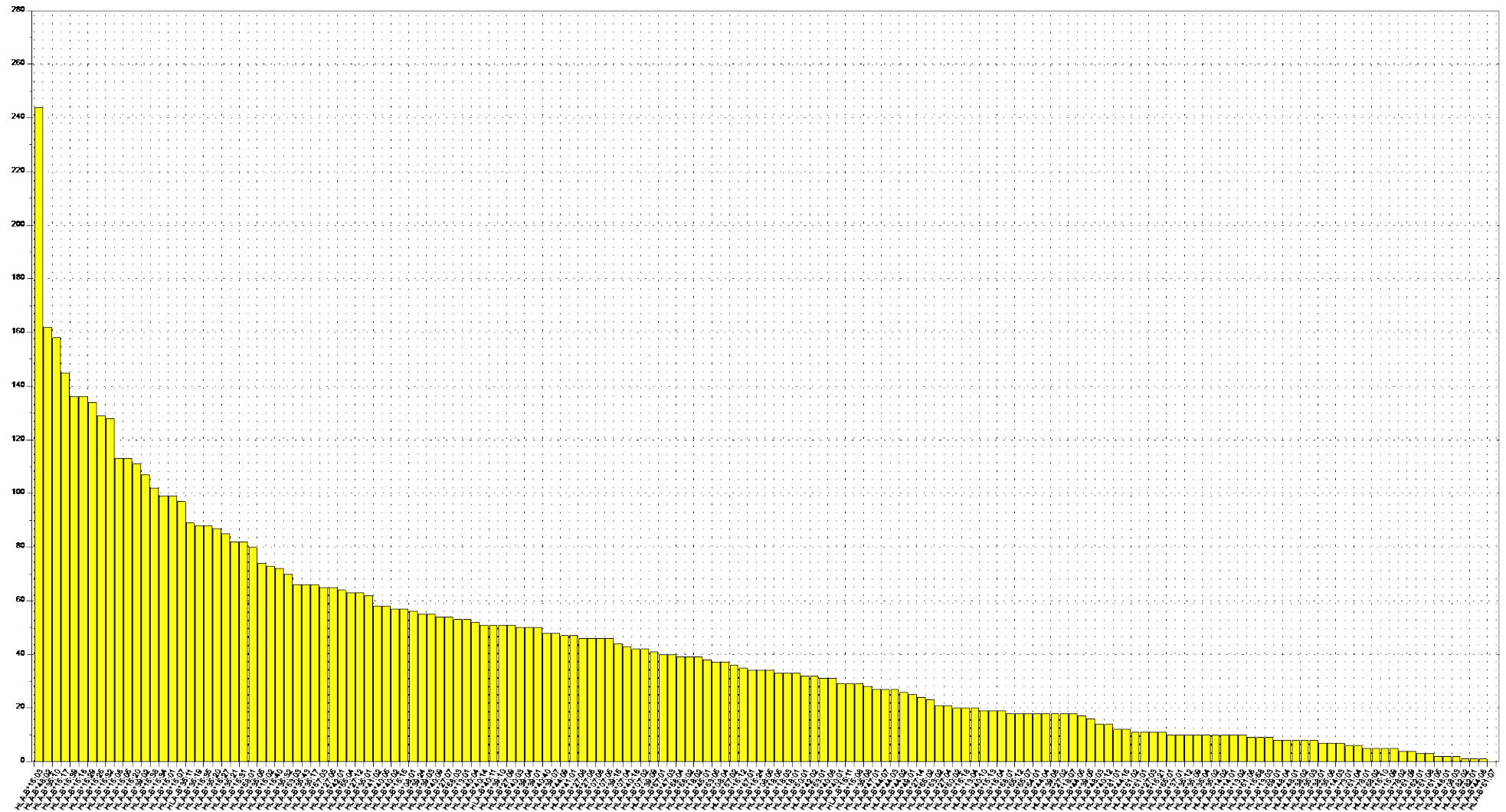


Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 500$ nM) and weak (500 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-B alleles ordered by number of presented peptides with strong binding prediction

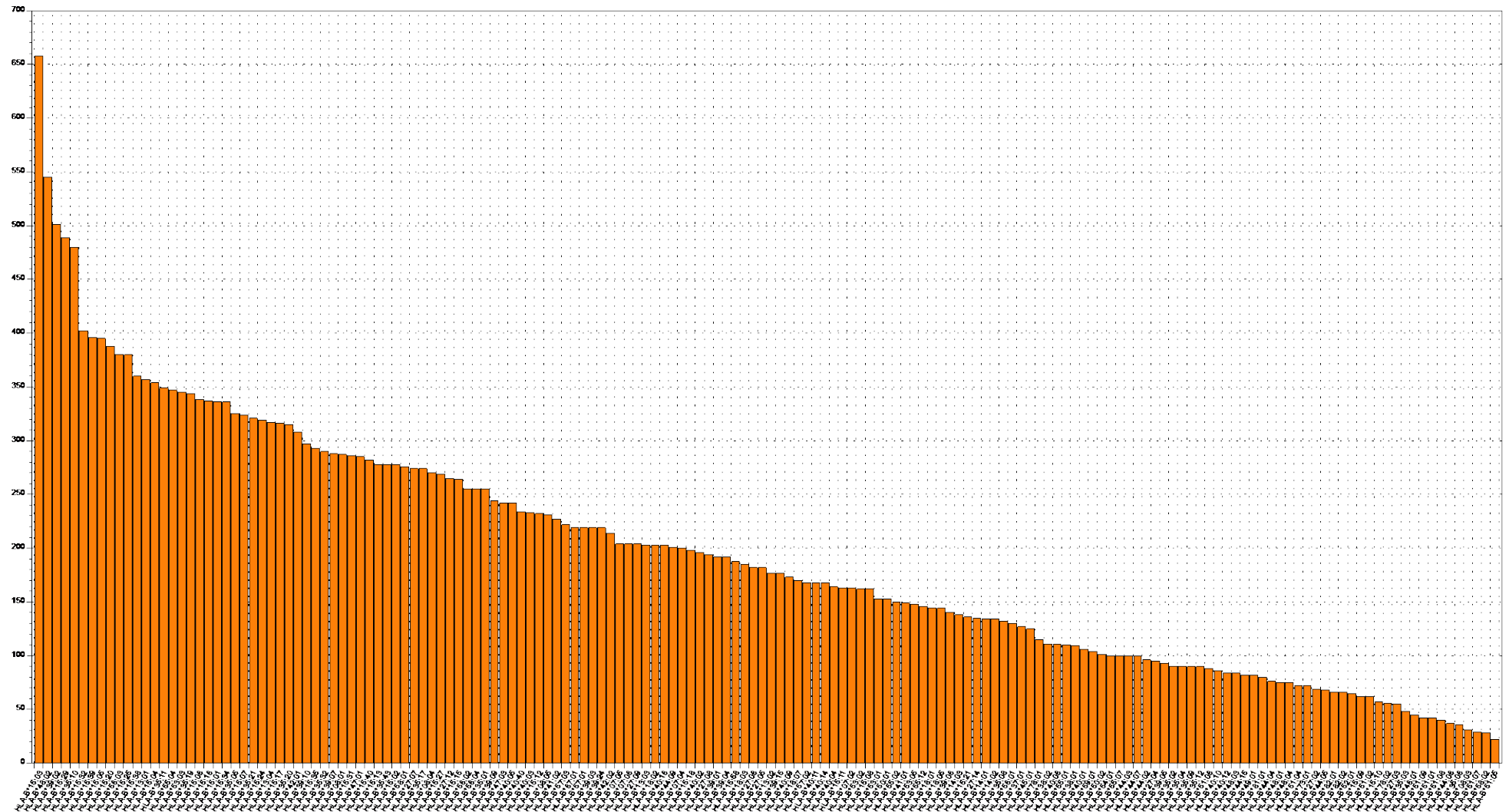


HLA-B alleles ordered by number of presented peptides with regular binding prediction



Alleles are ordered on the x-axis by their regular ($50 \text{ nM} < IC_{50} \leq 500 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-B alleles ordered by number of presented peptides with weak binding prediction



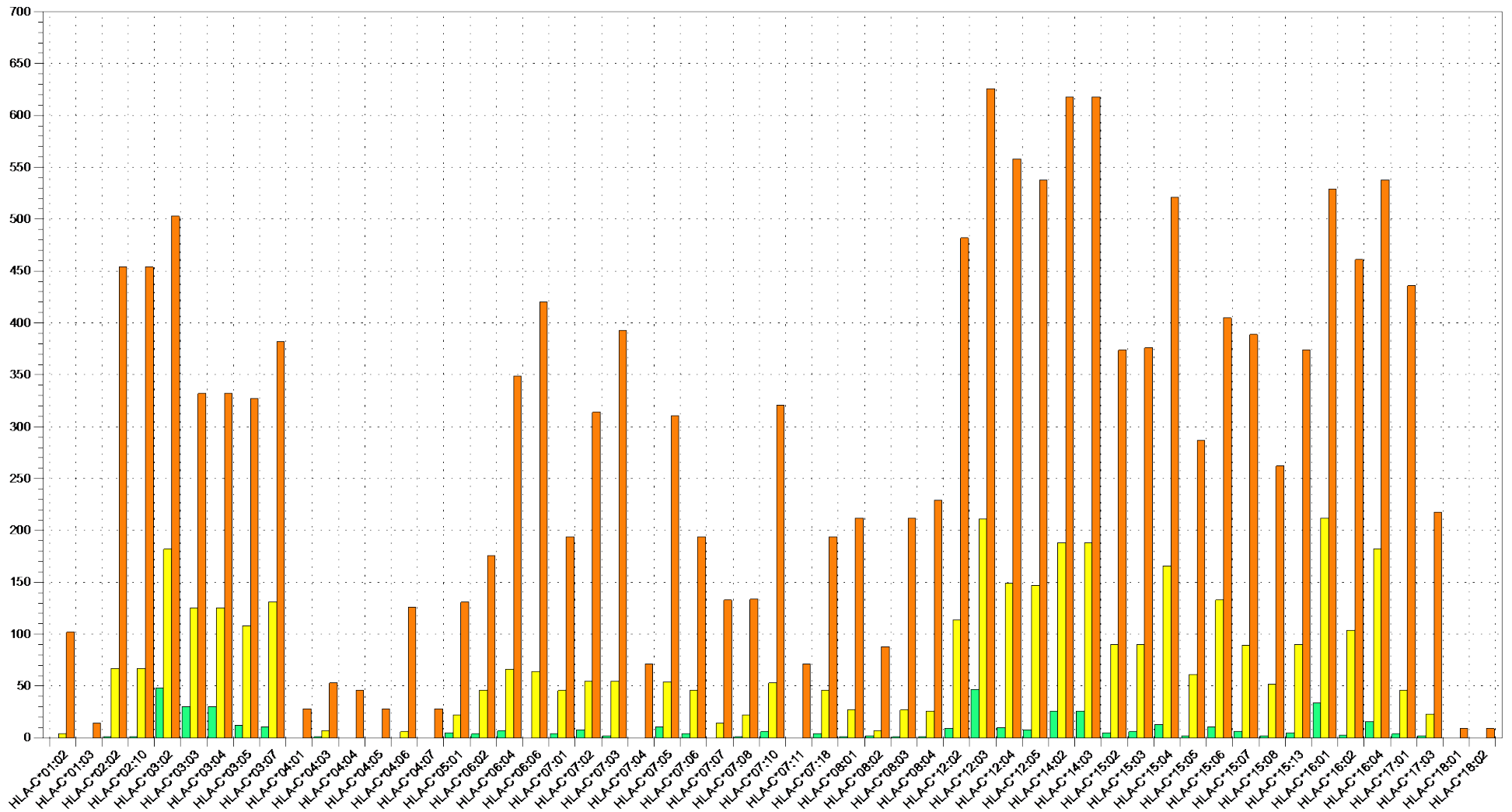
Alleles are ordered on the x-axis by their weak ($500 \text{ nM} < \text{IC}_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

Total number of peptides with strong, regular and weak binding predictions for *HLA-C*

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-C*01:02	0	4	102	4345
HLA-C*01:03	0	0	14	4437
HLA-C*02:02	1	67	454	3929
HLA-C*02:10	1	67	454	3929
HLA-C*03:02	48	182	503	3718
HLA-C*03:03	30	125	332	3964
HLA-C*03:04	30	125	332	3964
HLA-C*03:05	12	108	327	4004
HLA-C*03:07	11	131	382	3927
HLA-C*04:01	0	0	28	4423
HLA-C*04:03	1	7	53	4390
HLA-C*04:04	0	0	46	4405
HLA-C*04:05	0	0	28	4423
HLA-C*04:06	0	6	126	4319
HLA-C*04:07	0	0	28	4423
HLA-C*05:01	5	22	131	4293
HLA-C*06:02	4	46	176	4225
HLA-C*06:04	7	66	349	4029
HLA-C*06:06	0	64	420	3967
HLA-C*07:01	4	46	194	4207
HLA-C*07:02	8	55	314	4074
HLA-C*07:03	2	55	393	4001
HLA-C*07:04	0	0	71	4380
HLA-C*07:05	11	54	311	4075
HLA-C*07:06	4	46	194	4207
HLA-C*07:07	0	14	133	4304
HLA-C*07:08	1	22	134	4294
HLA-C*07:10	6	53	321	4071
HLA-C*07:11	0	0	71	4380
HLA-C*07:18	4	46	194	4207
HLA-C*08:01	1	27	212	4211
HLA-C*08:02	2	7	88	4354
HLA-C*08:03	1	27	212	4211
HLA-C*08:04	1	26	229	4195
HLA-C*12:02	9	114	482	3846
HLA-C*12:03	47	211	626	3567
HLA-C*12:04	10	149	558	3734
HLA-C*12:05	8	147	538	3758
HLA-C*14:02	26	188	618	3619
HLA-C*14:03	26	188	618	3619
HLA-C*15:02	5	90	374	3982
HLA-C*15:03	6	90	376	3979
HLA-C*15:04	13	166	521	3751
HLA-C*15:05	2	61	287	4101
HLA-C*15:06	11	133	405	3902
HLA-C*15:07	6	89	389	3967
HLA-C*15:08	2	52	262	4135
HLA-C*15:13	5	90	374	3982
HLA-C*16:01	34	212	529	3676
HLA-C*16:02	3	104	461	3883
HLA-C*16:04	16	182	538	3715
HLA-C*17:01	4	46	436	3965
HLA-C*17:03	2	23	218	4208
HLA-C*18:01	0	0	9	4442
HLA-C*18:02	0	0	9	4442

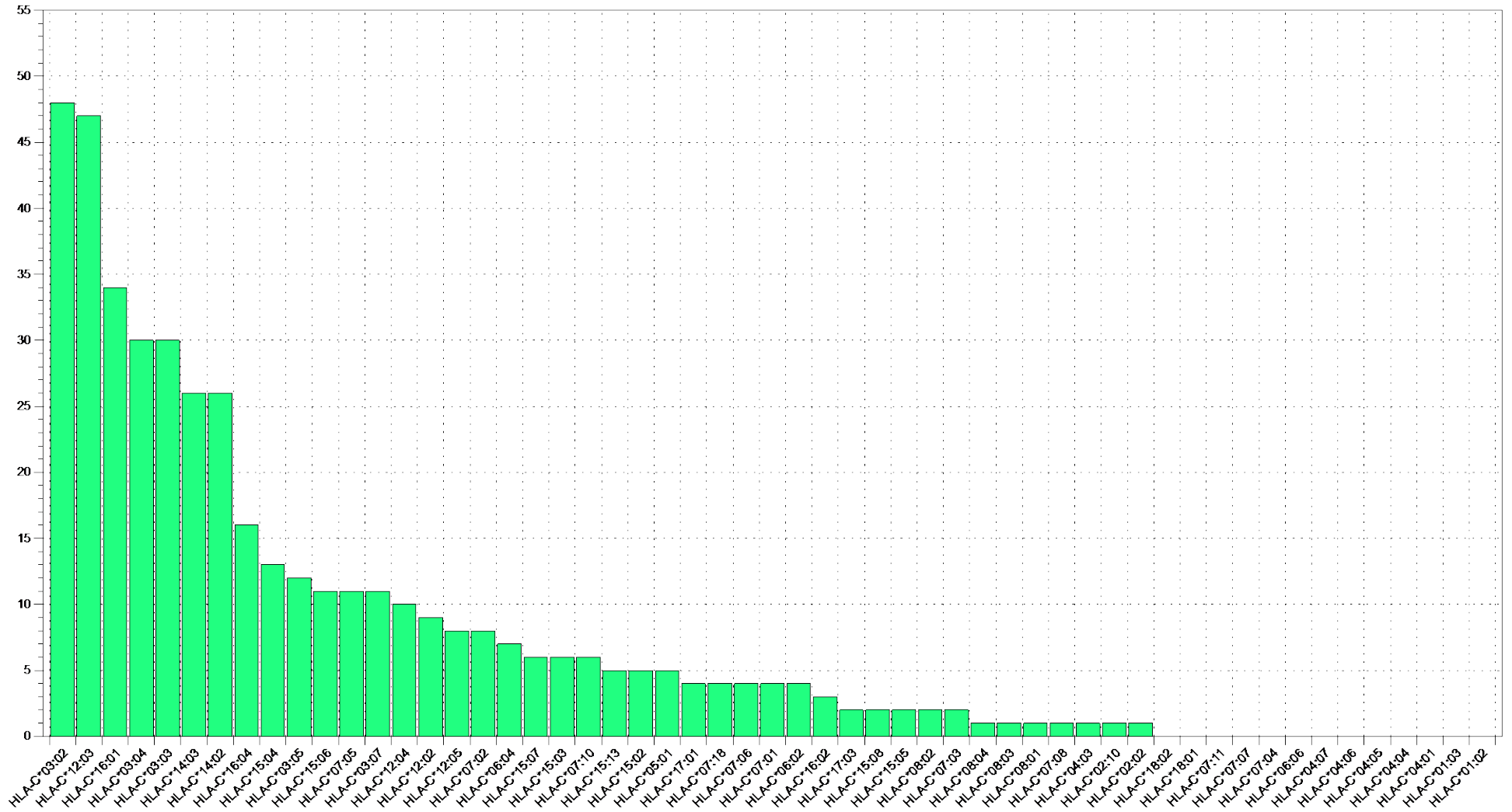
Alleles are ordered alphabetically.

General binding prediction tendencies for HLA-C



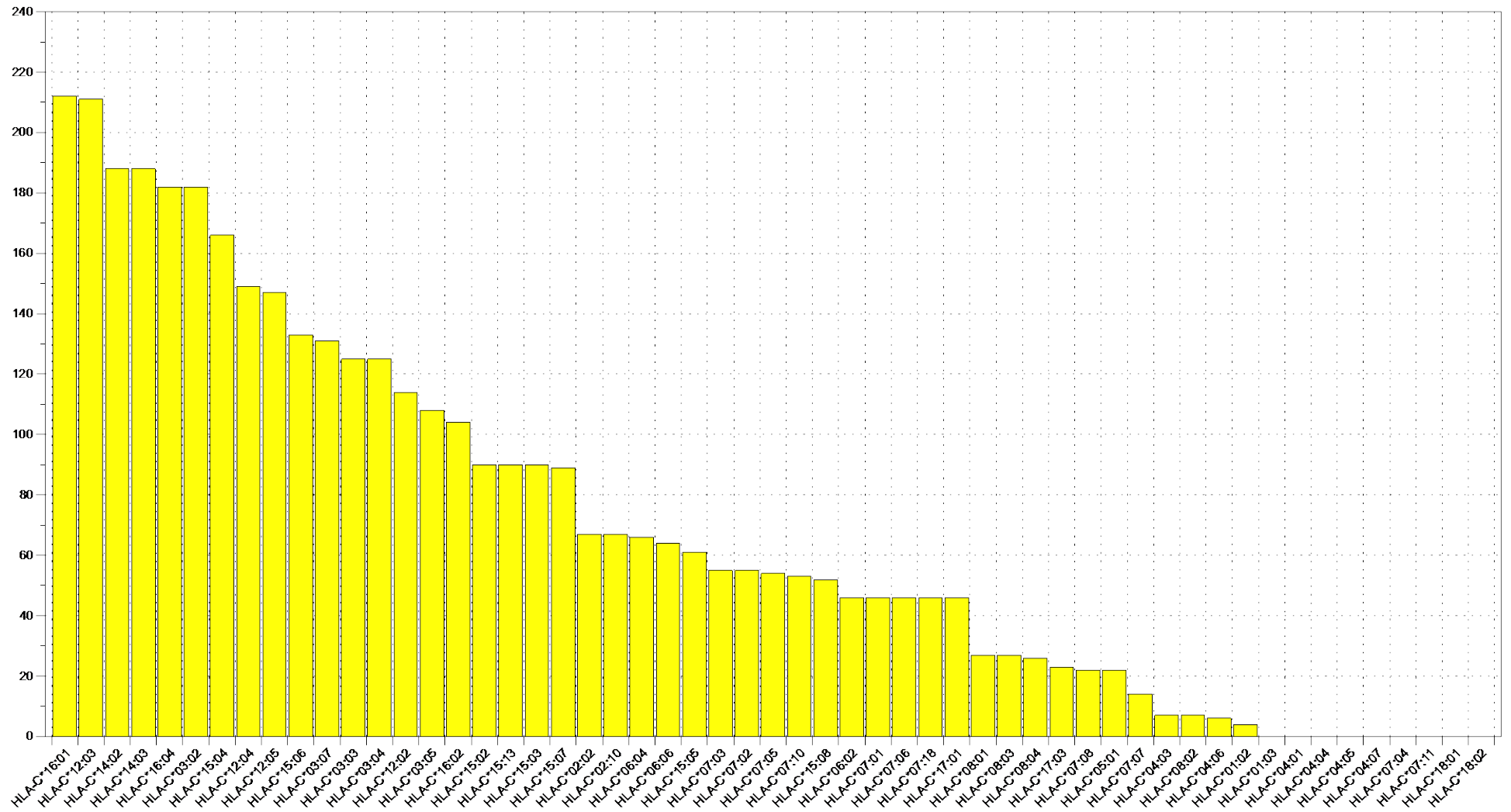
Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular ($50 \text{ nM} < IC_{50} \leq 500$ nM) and weak ($500 \text{ nM} < IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-C alleles ordered by number of presented peptides with strong binding prediction



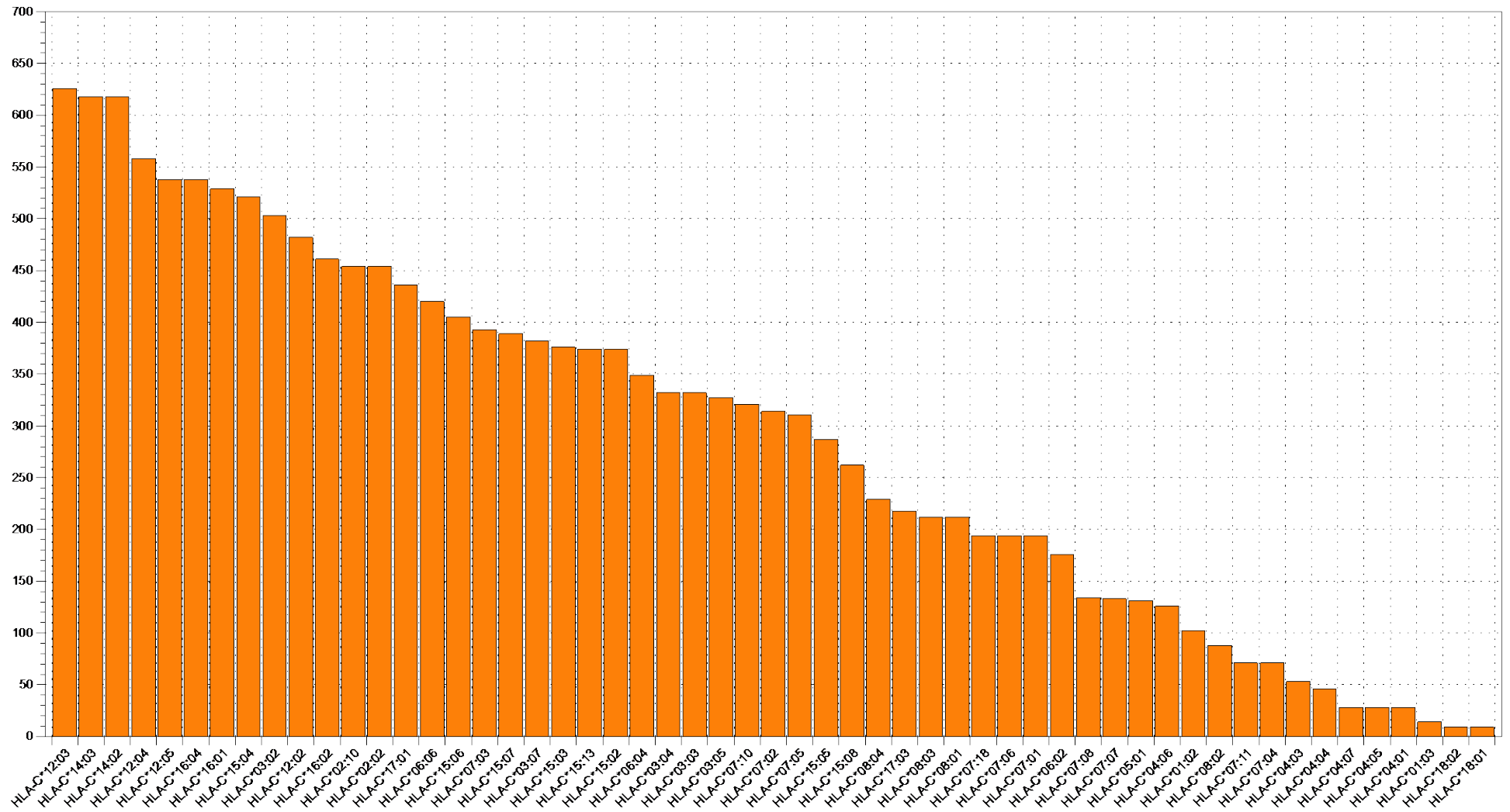
Alleles are ordered on the x-axis by their strong (IC₅₀ ≤ 50 nM) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-C alleles ordered by number of presented peptides with regular binding prediction



Alleles are ordered on the x-axis by their regular (50 nM < IC₅₀ ≤ 500 nM) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-C alleles ordered by number of presented peptides with weak binding prediction



Alleles are ordered on the x-axis by their weak ($500 \text{ nM} < \text{IC}_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

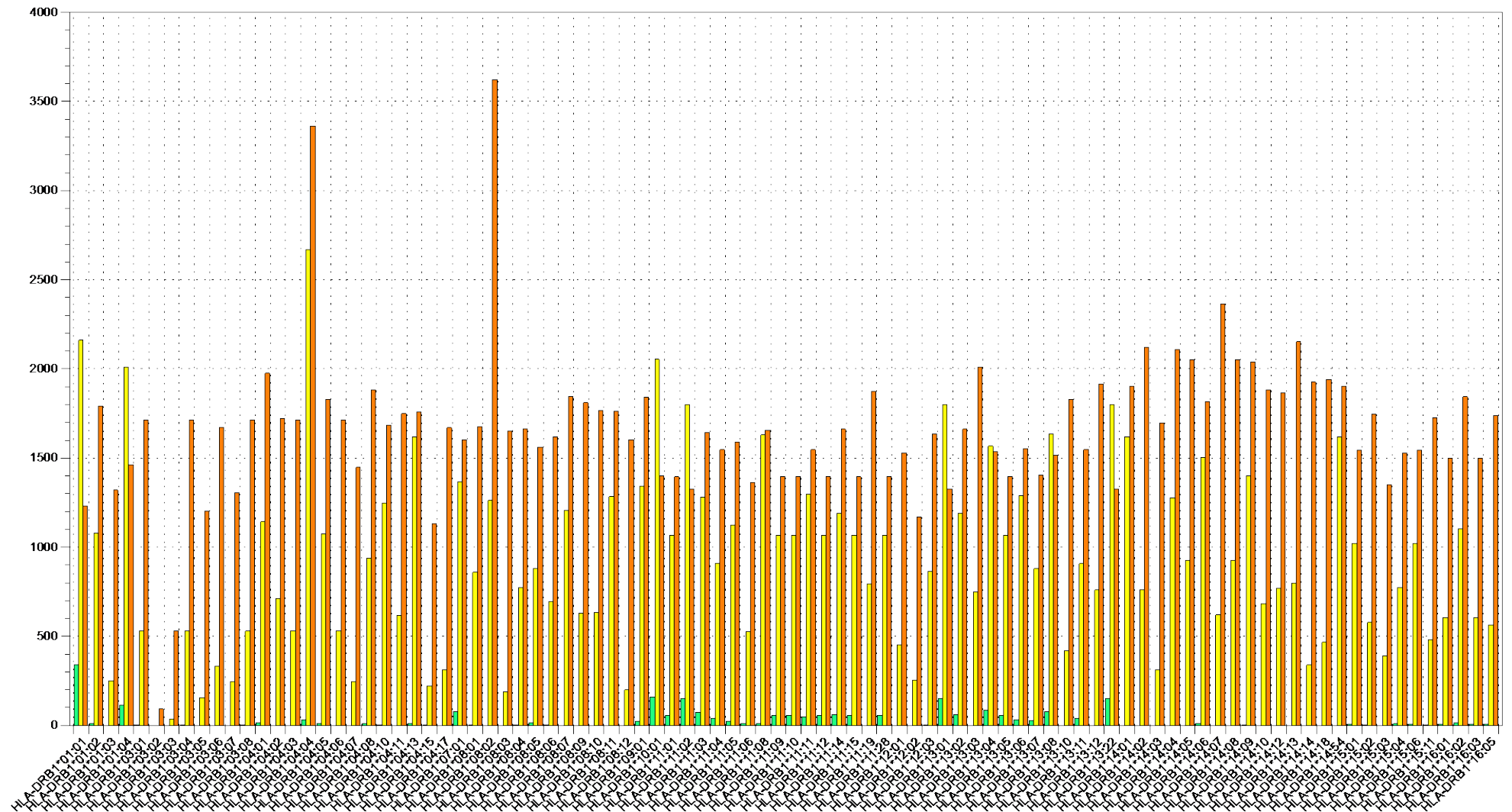
Total number of peptides with strong, regular and weak binding predictions for *HLA-DRB1*

	IC ₅₀ ≤ 50 nM Strong binders	50 nM < IC ₅₀ ≤ 1000 nM Regular binders	1000 nM < IC ₅₀ ≤ 5000 nM Weak binders	IC ₅₀ > 5000 nM Non binders
HLA-DRB1*01:01	341	2161	1231	674
HLA-DRB1*01:02	10	1078	1792	1527
HLA-DRB1*01:03	0	252	1320	2835
HLA-DRB1*01:04	115	2012	1462	818
HLA-DRB1*03:01	3	529	1712	2163
HLA-DRB1*03:02	0	0	93	4314
HLA-DRB1*03:03	0	36	531	3840
HLA-DRB1*03:04	3	529	1712	2163
HLA-DRB1*03:05	0	156	1203	3048
HLA-DRB1*03:06	0	332	1673	2402
HLA-DRB1*03:07	0	247	1304	2856
HLA-DRB1*03:08	3	529	1712	2163
HLA-DRB1*04:01	17	1143	1976	1271
HLA-DRB1*04:02	0	711	1722	1974
HLA-DRB1*04:03	0	532	1714	2161
HLA-DRB1*04:04	16	1335	1681	1375
HLA-DRB1*04:05	11	1073	1830	1493
HLA-DRB1*04:06	0	532	1714	2161
HLA-DRB1*04:07	0	247	1449	2711
HLA-DRB1*04:08	11	940	1883	1573
HLA-DRB1*04:10	4	1248	1684	1471
HLA-DRB1*04:11	0	617	1750	2040
HLA-DRB1*04:13	12	1618	1759	1018
HLA-DRB1*04:15	1	223	1133	3050
HLA-DRB1*04:17	0	314	1670	2423
HLA-DRB1*07:01	76	1366	1601	1364
HLA-DRB1*08:01	1	860	1676	1870
HLA-DRB1*08:02	0	631	1811	1965
HLA-DRB1*08:03	0	187	1651	2569
HLA-DRB1*08:04	5	774	1663	1965
HLA-DRB1*08:05	14	881	1562	1950
HLA-DRB1*08:06	3	695	1618	2091
HLA-DRB1*08:07	0	1207	1846	1354
HLA-DRB1*08:09	0	631	1811	1965
HLA-DRB1*08:10	0	635	1766	2006
HLA-DRB1*08:11	0	1283	1763	1361
HLA-DRB1*08:12	0	199	1603	2605
HLA-DRB1*09:01	23	1342	1841	1201
HLA-DRB1*10:01	160	2053	1399	795
HLA-DRB1*11:01	57	1068	1395	1887
HLA-DRB1*11:02	150	1800	1328	1129
HLA-DRB1*11:03	74	1279	1645	1409
HLA-DRB1*11:04	39	909	1548	1911
HLA-DRB1*11:05	23	1126	1590	1668
HLA-DRB1*11:06	13	527	1363	2504
HLA-DRB1*11:08	12	1630	1657	1108
HLA-DRB1*11:09	57	1068	1395	1887
HLA-DRB1*11:10	57	1068	1395	1887
HLA-DRB1*11:11	50	1299	1547	1511
HLA-DRB1*11:12	57	1068	1395	1887
HLA-DRB1*11:14	62	1190	1662	1493
HLA-DRB1*11:15	57	1068	1395	1887
HLA-DRB1*11:19	0	796	1874	1737
HLA-DRB1*11:28	57	1068	1395	1887
HLA-DRB1*12:01	0	454	1529	2424
HLA-DRB1*12:02	0	253	1169	2985
HLA-DRB1*12:03	1	864	1634	1908
HLA-DRB1*13:01	150	1800	1328	1129
HLA-DRB1*13:02	62	1190	1662	1493
HLA-DRB1*13:03	0	751	2010	1646
HLA-DRB1*13:04	85	1568	1536	1218
HLA-DRB1*13:05	57	1068	1395	1887

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 1000 nM Regular binders	1000 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-DRB1*13:06	33	1288	1551	1535
HLA-DRB1*13:07	30	879	1405	2093
HLA-DRB1*13:08	79	1634	1515	1179
HLA-DRB1*13:10	0	420	1827	2160
HLA-DRB1*13:11	39	909	1548	1911
HLA-DRB1*13:12	0	760	1916	1731
HLA-DRB1*13:22	150	1800	1328	1129
HLA-DRB1*14:01	0	1620	1905	882
HLA-DRB1*14:02	0	761	2122	1524
HLA-DRB1*14:03	0	314	1696	2397
HLA-DRB1*14:04	0	1277	2110	1020
HLA-DRB1*14:05	0	926	2051	1430
HLA-DRB1*14:06	12	1505	1815	1075
HLA-DRB1*14:07	0	621	2365	1421
HLA-DRB1*14:08	0	926	2051	1430
HLA-DRB1*14:09	4	1400	2037	966
HLA-DRB1*14:10	0	684	1883	1840
HLA-DRB1*14:12	0	769	1867	1771
HLA-DRB1*14:13	0	797	2152	1458
HLA-DRB1*14:14	0	340	1926	2141
HLA-DRB1*14:18	0	467	1940	2000
HLA-DRB1*14:54	0	1620	1905	882
HLA-DRB1*15:01	9	1022	1546	1830
HLA-DRB1*15:02	5	579	1746	2077
HLA-DRB1*15:03	0	390	1352	2665
HLA-DRB1*15:04	10	775	1530	2092
HLA-DRB1*15:06	9	1022	1546	1830
HLA-DRB1*15:11	2	479	1726	2200
HLA-DRB1*16:01	9	605	1498	2295
HLA-DRB1*16:02	17	1105	1843	1442
HLA-DRB1*16:03	9	605	1498	2295
HLA-DRB1*16:05	7	565	1739	2096

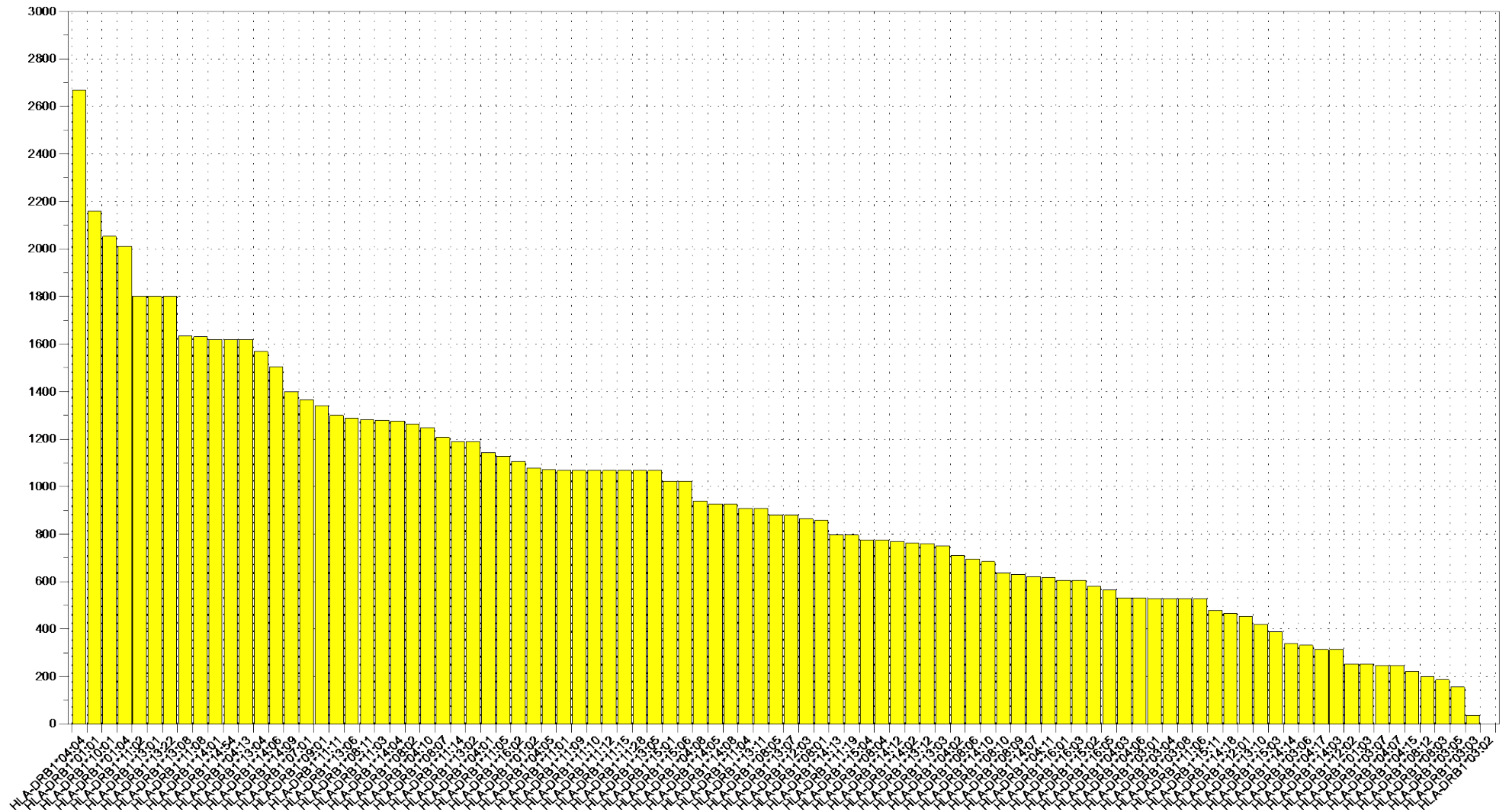
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-DRB1*

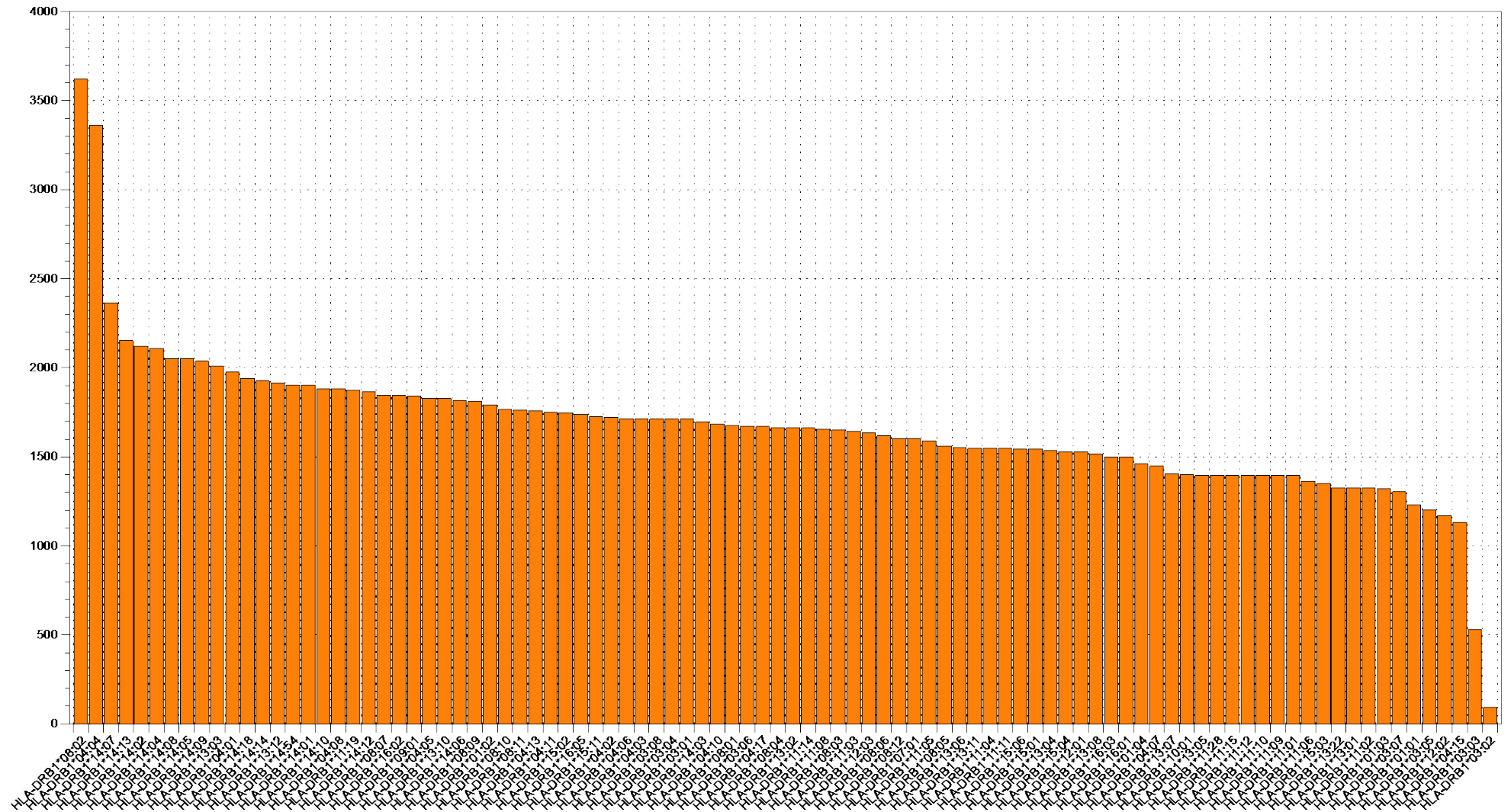


Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 1000$ nM) and weak (1000 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-DRB1 alleles ordered by number of presented peptides with regular binding prediction



HLA-DRB1 alleles ordered by number of presented peptides with weak binding prediction



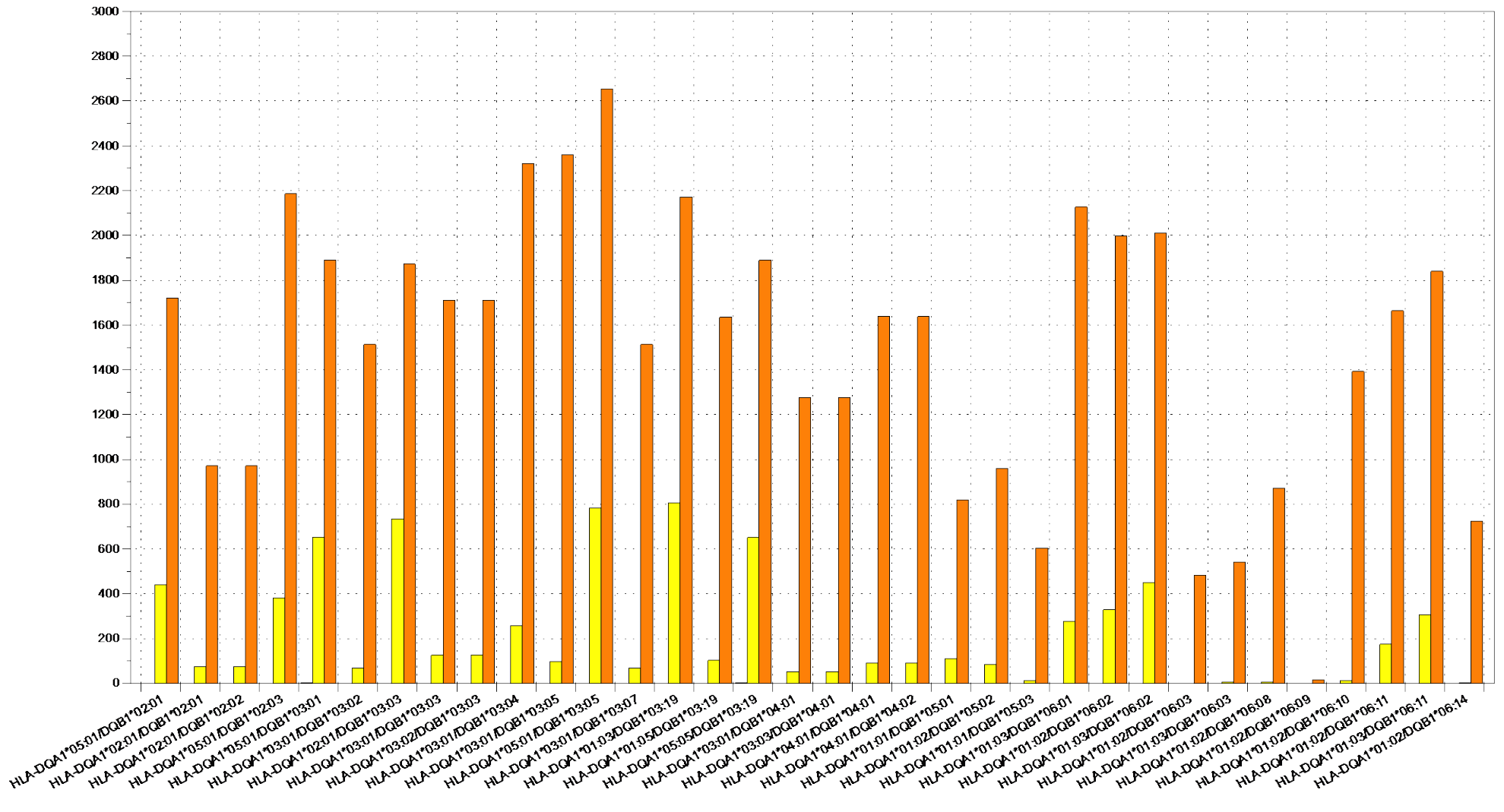
Alleles are ordered on the x-axis by their weak ($1000 \text{ nM} < IC_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

Total number of peptides with strong, regular and weak binding predictions for *HLA-DQA1/-DQB1*

	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 1000 nM Regular binders	1000 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-DQA1*05:01/DQB1*02:01	0	440	1722	2245
HLA-DQA1*02:01/DQB1*02:01	0	76	971	3360
HLA-DQA1*02:01/DQB1*02:02	0	76	971	3360
HLA-DQA1*05:01/DQB1*02:03	0	381	2186	1840
HLA-DQA1*05:01/DQB1*03:01	3	652	1890	1862
HLA-DQA1*03:01/DQB1*03:02	0	68	1513	2826
HLA-DQA1*02:01/DQB1*03:03	0	735	1873	1799
HLA-DQA1*03:01/DQB1*03:03	0	126	1711	2570
HLA-DQA1*03:02/DQB1*03:03	0	126	1711	2570
HLA-DQA1*03:01/DQB1*03:04	0	259	2322	1826
HLA-DQA1*03:01/DQB1*03:05	0	99	2361	1947
HLA-DQA1*05:01/DQB1*03:05	0	782	2654	971
HLA-DQA1*03:01/DQB1*03:07	0	68	1513	2826
HLA-DQA1*01:03/DQB1*03:19	0	806	2172	1429
HLA-DQA1*01:05/DQB1*03:19	0	103	1635	2669
HLA-DQA1*05:05/DQB1*03:19	3	652	1890	1862
HLA-DQA1*03:01/DQB1*04:01	0	53	1278	3076
HLA-DQA1*03:03/DQB1*04:01	0	53	1278	3076
HLA-DQA1*04:01/DQB1*04:01	0	92	1637	2678
HLA-DQA1*04:01/DQB1*04:02	0	92	1637	2678
HLA-DQA1*01:01/DQB1*05:01	0	110	819	3478
HLA-DQA1*01:02/DQB1*05:02	0	83	960	3364
HLA-DQA1*01:01/DQB1*05:03	0	12	604	3791
HLA-DQA1*01:03/DQB1*06:01	0	277	2128	2002
HLA-DQA1*01:02/DQB1*06:02	0	329	1998	2080
HLA-DQA1*01:03/DQB1*06:02	0	451	2011	1945
HLA-DQA1*01:02/DQB1*06:03	0	0	482	3925
HLA-DQA1*01:03/DQB1*06:03	0	6	542	3859
HLA-DQA1*01:02/DQB1*06:08	0	7	872	3528
HLA-DQA1*01:02/DQB1*06:09	0	0	15	4392
HLA-DQA1*01:02/DQB1*06:10	0	12	1392	3003
HLA-DQA1*01:02/DQB1*06:11	0	174	1664	2569
HLA-DQA1*01:03/DQB1*06:11	0	307	1840	2260
HLA-DQA1*01:02/DQB1*06:14	0	2	725	3680

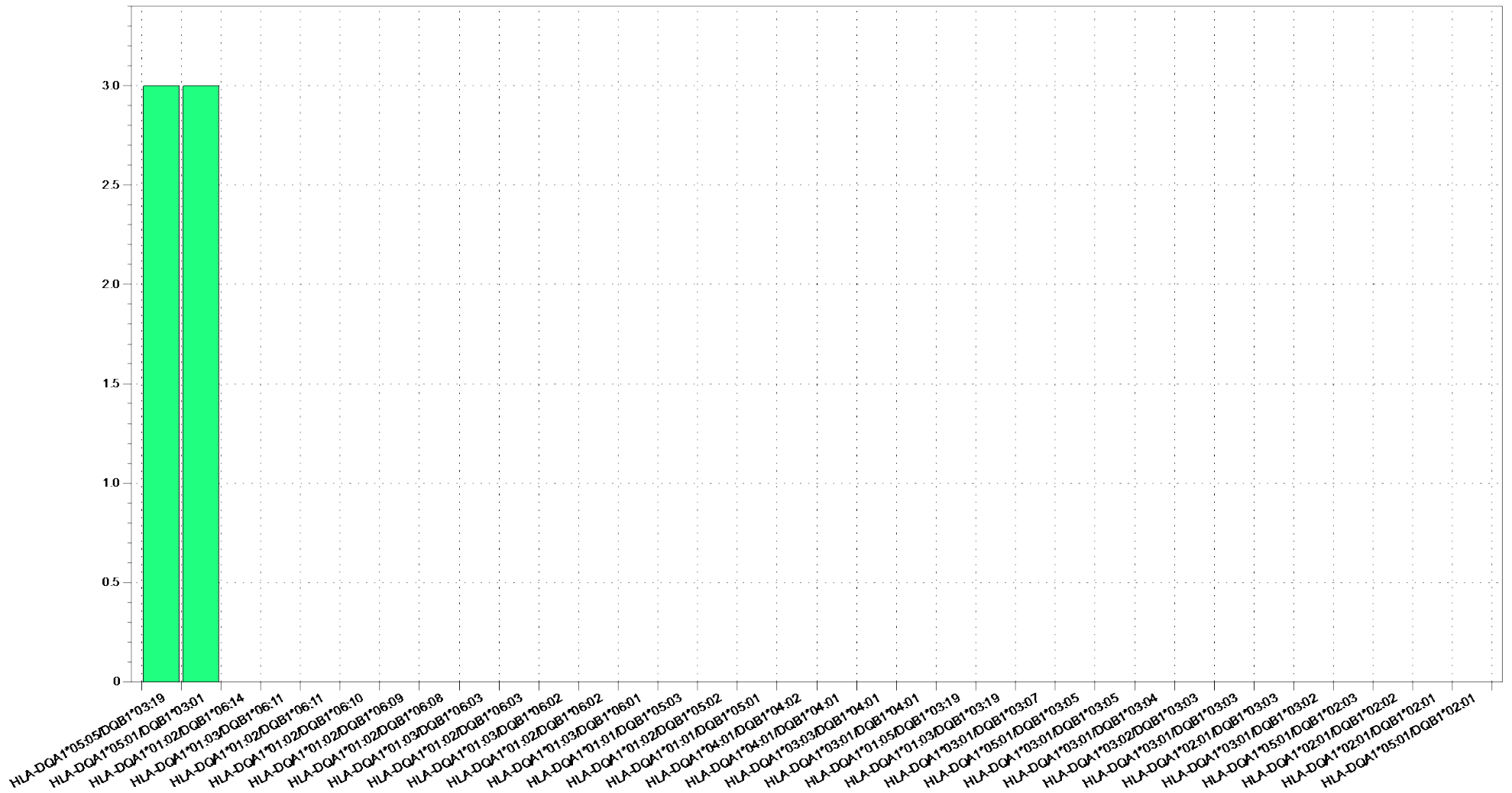
Allele combinations are ordered alphabetically.

General binding prediction tendencies for *HLA-DQA1/DQB1*



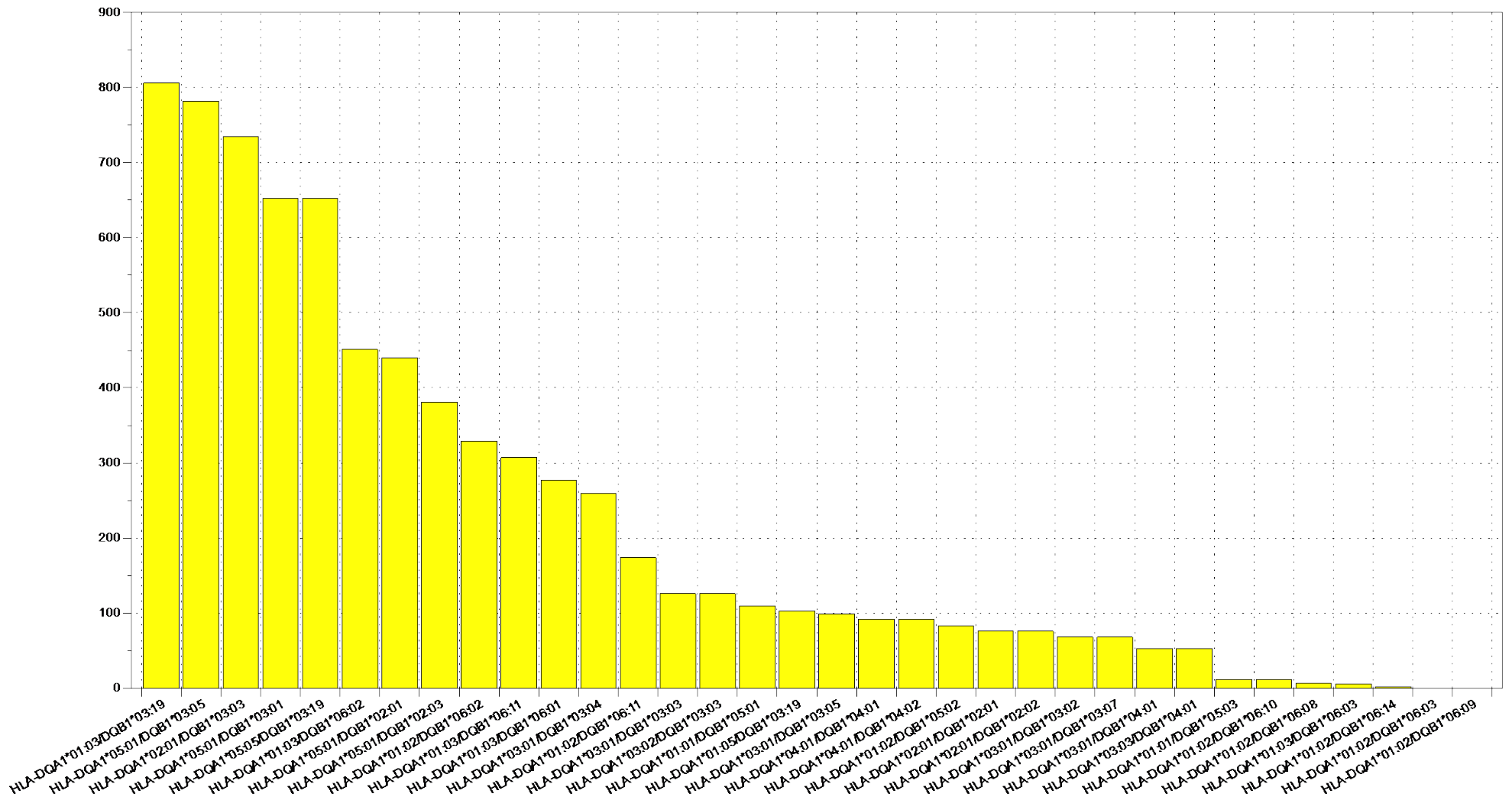
Allele combinations are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 1000$ nM) and weak (1000 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-DQA1/-DQB1 alleles ordered by number of presented peptides with strong binding prediction



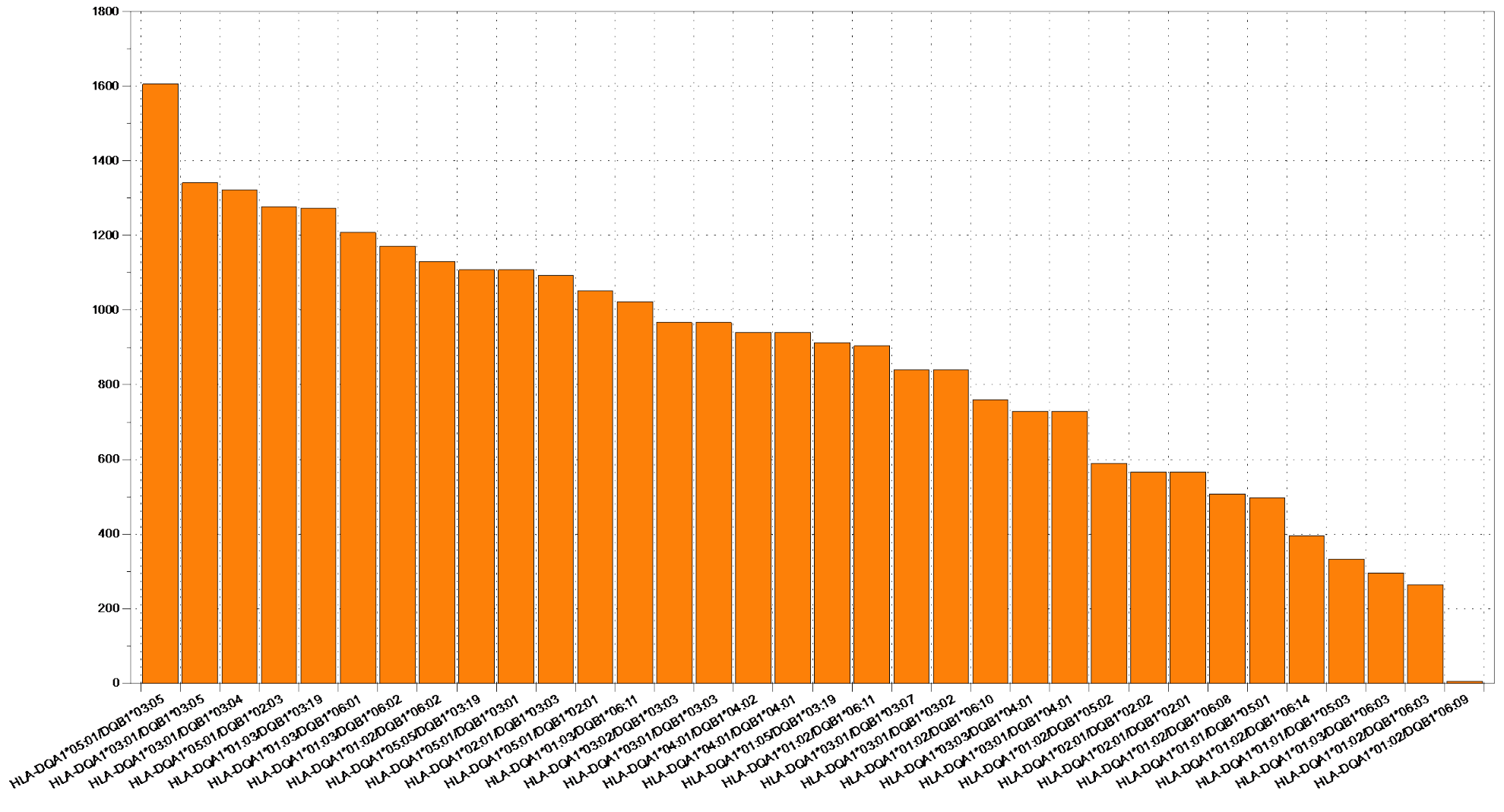
Allele combinations are ordered on the x-axis by their strong ($IC_{50} \leq 50$ nM) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-DQA1/-DQB1 alleles ordered by number of presented peptides with regular binding prediction



Allele combinations are ordered on the x-axis by their regular ($50 \text{ nM} < IC_{50} \leq 1000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-DQA1/DQB1 alleles ordered by number of presented peptides with weak binding prediction



Allele combinations are ordered on the x-axis by their weak ($1000 \text{ nM} < IC_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.