

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 3

Extended results for the binding predictions for MERS-CoV

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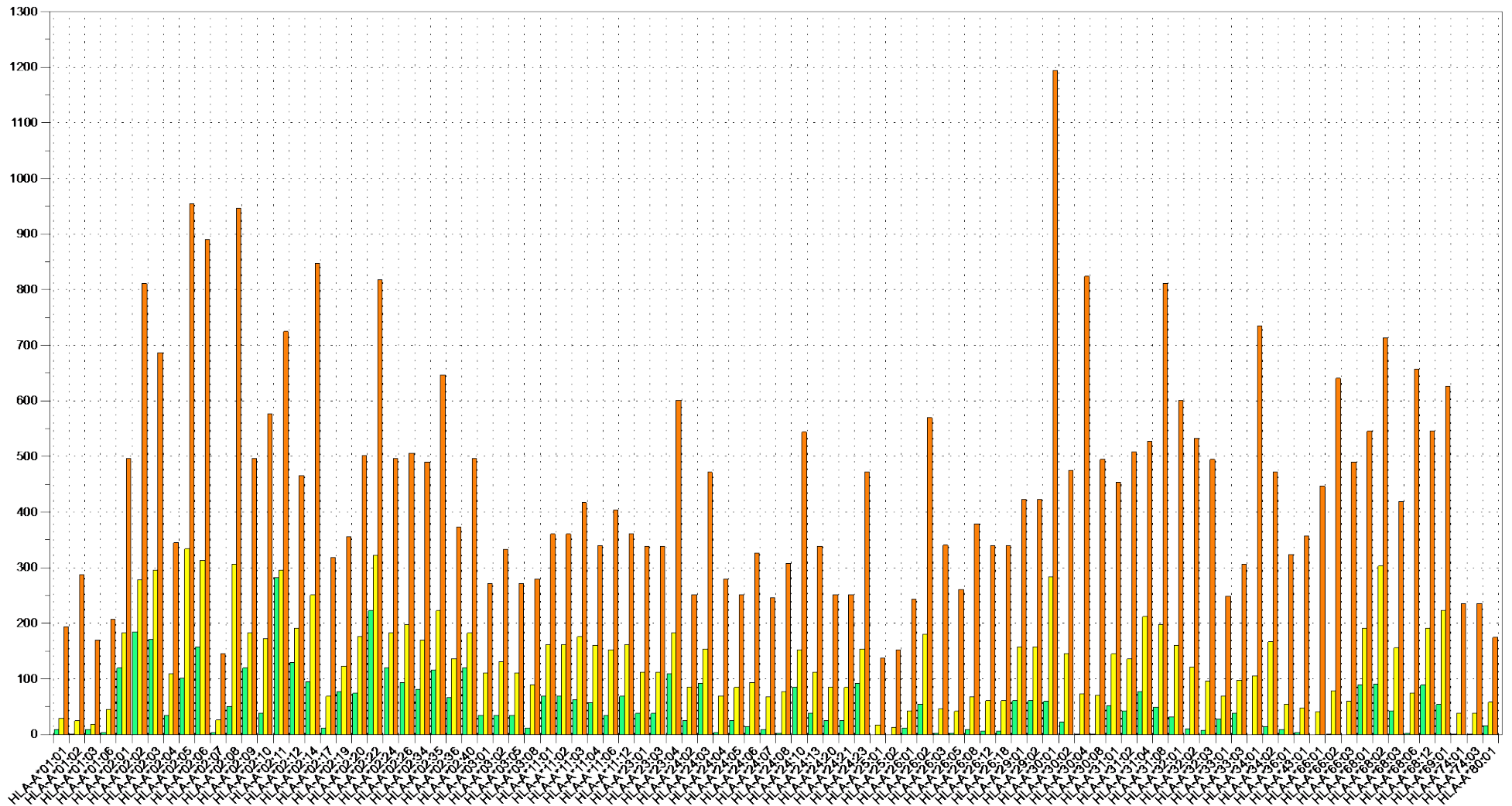
Total number of peptides with strong, regular and weak binding predictions for *HLA-A*

	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	9	29	194	6838
HLA-A*01:02	1	25	288	6756
HLA-A*01:03	9	19	170	6872
HLA-A*01:06	4	45	208	6813
HLA-A*02:01	120	183	497	6270
HLA-A*02:02	184	278	811	5797
HLA-A*02:03	171	296	687	5916
HLA-A*02:04	34	110	345	6581
HLA-A*02:05	102	334	955	5679
HLA-A*02:06	158	313	891	5708
HLA-A*02:07	4	26	145	6895
HLA-A*02:08	51	307	946	5766
HLA-A*02:09	120	183	497	6270
HLA-A*02:10	39	172	577	6282
HLA-A*02:11	282	295	725	5768
HLA-A*02:12	129	191	466	6284
HLA-A*02:14	95	251	847	5877
HLA-A*02:17	12	69	319	6670
HLA-A*02:19	77	123	356	6514
HLA-A*02:20	74	176	502	6318
HLA-A*02:22	223	322	818	5707
HLA-A*02:24	120	183	497	6270
HLA-A*02:26	94	198	506	6272
HLA-A*02:34	81	170	490	6329
HLA-A*02:35	116	223	647	6084
HLA-A*02:36	66	136	374	6494
HLA-A*02:40	120	183	497	6270
HLA-A*03:01	35	111	272	6652
HLA-A*03:02	35	131	333	6571
HLA-A*03:05	35	111	272	6652
HLA-A*03:08	12	89	280	6689
HLA-A*11:01	69	162	361	6478
HLA-A*11:02	69	162	361	6478
HLA-A*11:03	62	176	417	6415
HLA-A*11:04	57	161	340	6512
HLA-A*11:06	35	153	404	6478
HLA-A*11:12	69	162	361	6478
HLA-A*23:01	38	112	339	6581
HLA-A*23:03	38	112	339	6581
HLA-A*23:04	109	183	601	6177
HLA-A*24:02	25	85	252	6708
HLA-A*24:03	92	154	472	6352
HLA-A*24:04	4	70	279	6717
HLA-A*24:05	25	85	252	6708
HLA-A*24:06	15	94	327	6634
HLA-A*24:07	9	68	246	6747
HLA-A*24:08	3	77	308	6682
HLA-A*24:10	85	153	544	6288
HLA-A*24:13	38	112	339	6581
HLA-A*24:20	25	85	252	6708
HLA-A*24:21	25	85	252	6708
HLA-A*24:23	92	154	472	6352
HLA-A*25:01	0	17	137	6916
HLA-A*25:02	0	13	153	6904
HLA-A*26:01	12	42	244	6772
HLA-A*26:02	55	181	570	6264
HLA-A*26:03	2	47	341	6680
HLA-A*26:05	3	42	261	6764
HLA-A*26:08	9	68	379	6614
HLA-A*26:12	6	61	340	6663
HLA-A*26:18	6	61	340	6663
HLA-A*29:01	61	158	423	6428

	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	61	158	423	6428
HLA-A*30:01	60	283	1194	5533
HLA-A*30:02	22	145	475	6428
HLA-A*30:04	1	73	824	6172
HLA-A*30:08	1	71	495	6503
HLA-A*31:01	52	145	454	6419
HLA-A*31:02	43	136	509	6382
HLA-A*31:04	78	212	528	6252
HLA-A*31:08	49	198	811	6012
HLA-A*32:01	32	160	601	6277
HLA-A*32:02	11	122	533	6404
HLA-A*32:03	8	96	495	6471
HLA-A*33:01	28	69	249	6724
HLA-A*33:03	38	98	307	6627
HLA-A*34:01	0	106	735	6229
HLA-A*34:02	14	167	473	6416
HLA-A*36:01	9	55	324	6682
HLA-A*43:01	4	48	357	6661
HLA-A*66:01	0	41	447	6582
HLA-A*66:02	1	79	641	6349
HLA-A*66:03	0	60	490	6520
HLA-A*68:01	89	191	546	6244
HLA-A*68:02	91	303	714	5962
HLA-A*68:03	42	156	419	6453
HLA-A*68:06	2	74	657	6337
HLA-A*68:12	89	191	546	6244
HLA-A*69:01	54	223	626	6167
HLA-A*74:01	1	39	236	6794
HLA-A*74:03	1	39	236	6794
HLA-A*80:01	16	58	175	6821

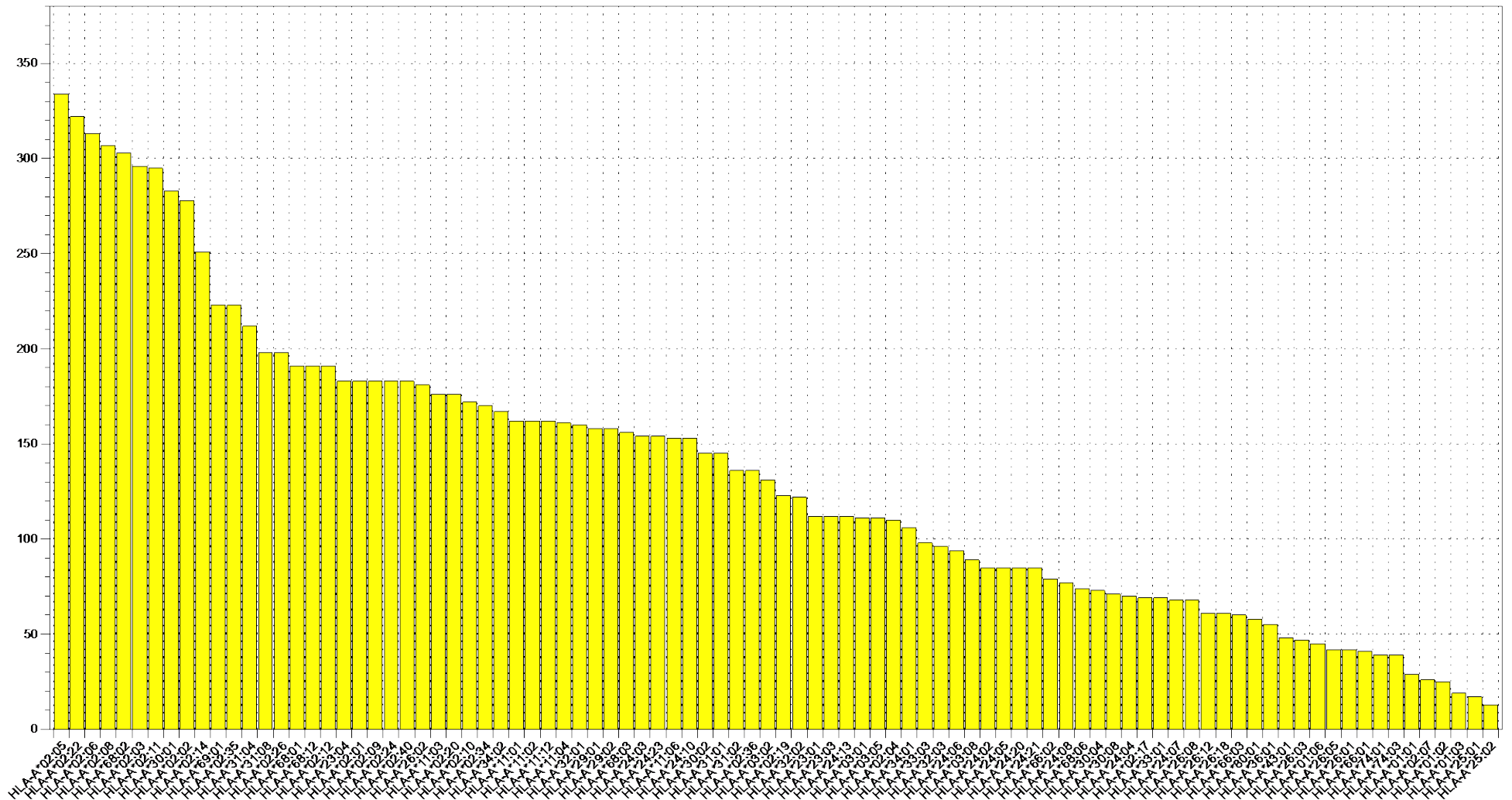
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-A*



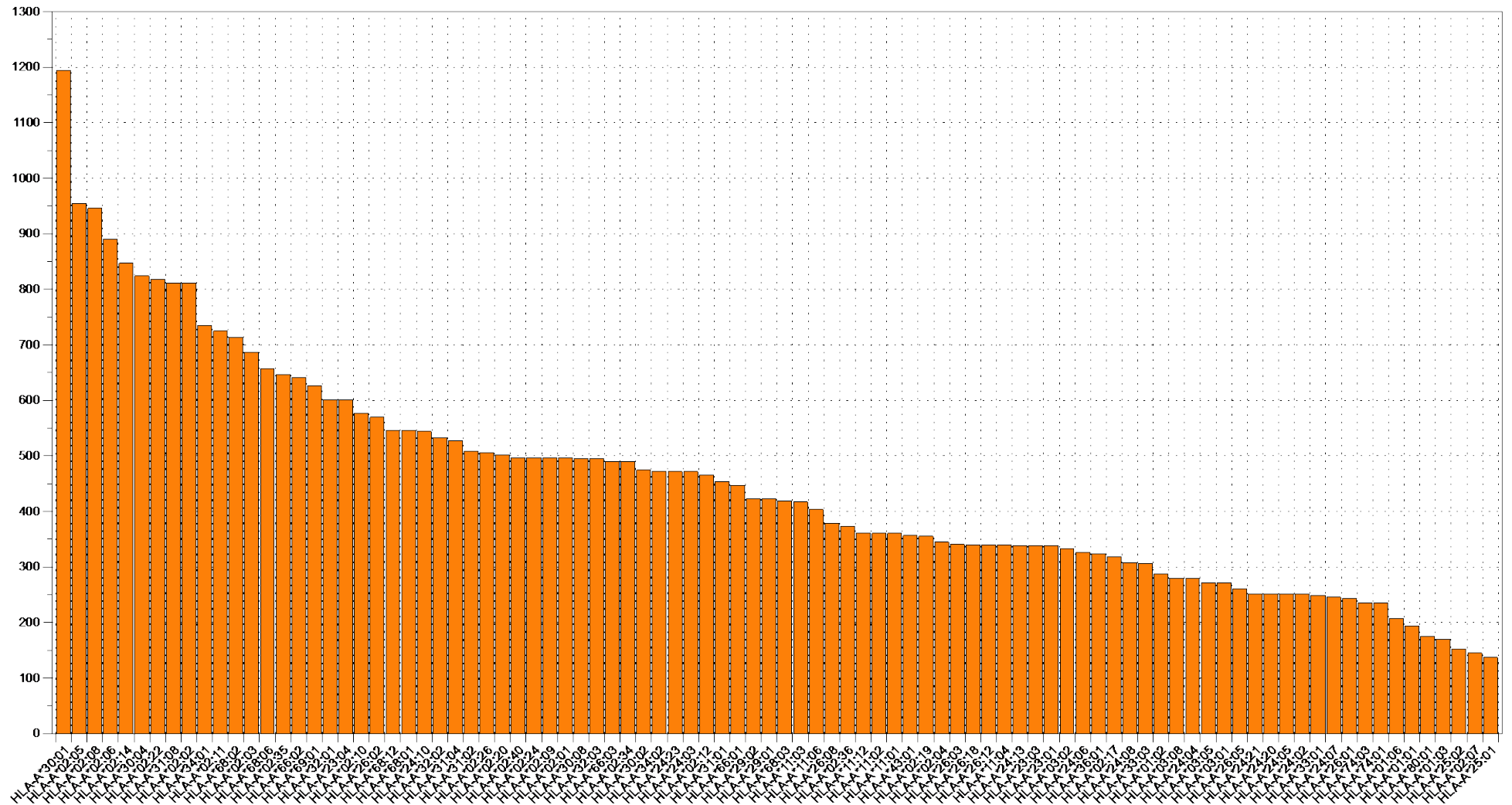
Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 500$ nM) and weak (500 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

HLA-A alleles ordered by number of presented peptides with 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-A 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-B*

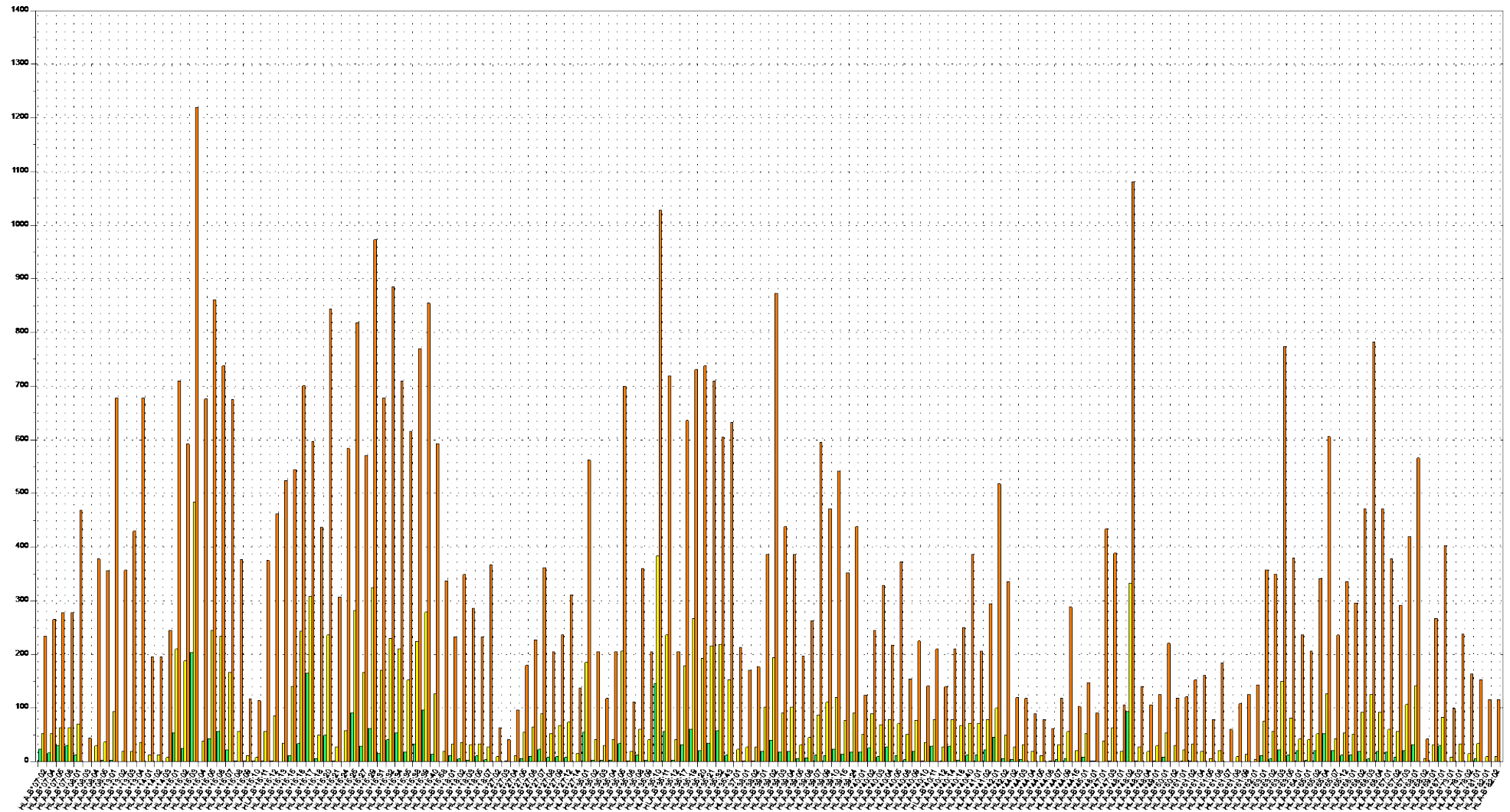
	IC₅₀ ≤ 50 nM Strong binders	50 nM < IC₅₀ ≤ 500 nM Regular binders	500 nM < IC₅₀ ≤ 5000 nM Weak binders	IC₅₀ > 5000 nM Non binders
HLA-B*07:02	23	53	234	6760
HLA-B*07:04	16	52	265	6737
HLA-B*07:05	30	64	278	6698
HLA-B*07:06	30	64	278	6698
HLA-B*08:01	13	70	469	6518
HLA-B*08:03	0	0	44	7026
HLA-B*08:04	0	30	378	6662
HLA-B*08:05	3	37	356	6674
HLA-B*13:01	3	93	678	6296
HLA-B*13:02	0	19	357	6694
HLA-B*13:03	0	19	430	6621
HLA-B*13:04	0	36	678	6356
HLA-B*14:01	0	12	196	6862
HLA-B*14:02	0	12	196	6862
HLA-B*14:03	0	8	245	6817
HLA-B*15:01	54	210	710	6096
HLA-B*15:02	25	188	592	6265
HLA-B*15:03	204	484	1220	5162
HLA-B*15:04	0	39	676	6355
HLA-B*15:05	43	245	861	5921
HLA-B*15:06	56	234	738	6042
HLA-B*15:07	22	166	675	6207
HLA-B*15:08	2	57	377	6634
HLA-B*15:09	2	11	117	6940
HLA-B*15:10	2	8	114	6946
HLA-B*15:11	2	57	375	6636
HLA-B*15:12	2	85	462	6521
HLA-B*15:13	0	34	524	6512
HLA-B*15:15	11	140	545	6374
HLA-B*15:16	34	243	701	6092
HLA-B*15:17	165	308	597	6000
HLA-B*15:18	6	50	437	6577
HLA-B*15:20	49	236	844	5941
HLA-B*15:21	2	28	307	6733
HLA-B*15:24	0	58	584	6428
HLA-B*15:25	91	282	818	5879
HLA-B*15:27	29	167	571	6303
HLA-B*15:29	62	325	973	5710
HLA-B*15:31	15	171	678	6206
HLA-B*15:32	41	229	886	5914
HLA-B*15:34	54	210	710	6096
HLA-B*15:35	18	152	616	6284
HLA-B*15:38	33	224	770	6043
HLA-B*15:39	96	279	855	5840
HLA-B*15:40	14	127	593	6336
HLA-B*15:58	0	20	337	6713
HLA-B*18:01	11	33	233	6793
HLA-B*18:02	5	36	349	6680
HLA-B*18:03	3	32	286	6749
HLA-B*18:05	11	33	233	6793
HLA-B*18:07	4	28	367	6671
HLA-B*27:02	0	9	64	6997
HLA-B*27:03	0	2	41	7027
HLA-B*27:04	0	11	97	6962
HLA-B*27:05	5	55	180	6830
HLA-B*27:06	10	65	227	6768
HLA-B*27:07	23	90	362	6595
HLA-B*27:08	8	53	205	6804
HLA-B*27:09	9	68	236	6757
HLA-B*27:12	8	74	311	6677
HLA-B*27:14	0	15	137	6918
HLA-B*35:01	55	185	562	6268

	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	3	41	205	6821
HLA-B*35:03	3	30	118	6919
HLA-B*35:04	3	41	205	6821
HLA-B*35:05	34	206	700	6130
HLA-B*35:06	1	19	111	6939
HLA-B*35:08	13	61	360	6636
HLA-B*35:09	3	41	205	6821
HLA-B*35:10	146	384	1028	5512
HLA-B*35:11	56	236	719	6059
HLA-B*35:12	3	41	205	6821
HLA-B*35:17	31	178	636	6225
HLA-B*35:19	60	267	731	6012
HLA-B*35:20	21	193	738	6118
HLA-B*35:21	35	216	710	6109
HLA-B*35:32	58	219	605	6188
HLA-B*35:43	12	153	632	6273
HLA-B*37:01	0	23	213	6834
HLA-B*38:01	1	27	171	6871
HLA-B*38:02	1	28	177	6864
HLA-B*39:01	20	102	387	6561
HLA-B*39:02	40	194	873	5963
HLA-B*39:03	18	91	438	6523
HLA-B*39:04	20	102	387	6561
HLA-B*39:05	6	31	197	6836
HLA-B*39:06	7	45	263	6755
HLA-B*39:07	12	87	596	6375
HLA-B*39:09	11	111	472	6476
HLA-B*39:10	24	119	542	6385
HLA-B*39:15	14	77	352	6627
HLA-B*39:24	18	91	438	6523
HLA-B*40:01	18	51	124	6877
HLA-B*40:02	26	89	245	6710
HLA-B*40:03	9	69	329	6663
HLA-B*40:04	28	78	217	6747
HLA-B*40:05	11	71	372	6616
HLA-B*40:06	4	51	154	6861
HLA-B*40:09	20	77	225	6748
HLA-B*40:10	1	36	141	6892
HLA-B*40:11	29	79	210	6752
HLA-B*40:12	1	28	140	6901
HLA-B*40:14	29	79	210	6752
HLA-B*40:16	3	67	250	6750
HLA-B*40:40	12	72	387	6599
HLA-B*41:01	12	72	206	6780
HLA-B*41:02	22	79	294	6675
HLA-B*42:01	45	100	518	6407
HLA-B*42:02	6	50	336	6678
HLA-B*44:02	4	28	119	6919
HLA-B*44:03	4	32	118	6916
HLA-B*44:04	0	19	90	6961
HLA-B*44:05	0	11	79	6980
HLA-B*44:06	0	1	62	7007
HLA-B*44:07	4	32	118	6916
HLA-B*44:09	6	56	288	6720
HLA-B*44:15	0	21	103	6946
HLA-B*45:01	8	53	147	6862
HLA-B*46:01	1	2	91	6976
HLA-B*47:01	0	38	434	6598
HLA-B*47:03	2	63	389	6616
HLA-B*48:01	0	19	106	6945
HLA-B*48:02	94	333	1080	5563
HLA-B*48:03	1	28	140	6901
HLA-B*48:04	0	19	106	6945
HLA-B*49:01	2	30	125	6913
HLA-B*50:01	8	54	221	6787

	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	30	118	6922
HLA-B*51:01	1	22	121	6926
HLA-B*51:02	1	33	152	6884
HLA-B*51:04	0	19	161	6890
HLA-B*51:05	0	6	78	6986
HLA-B*51:06	0	21	184	6865
HLA-B*51:07	0	0	60	7010
HLA-B*51:08	0	9	108	6953
HLA-B*51:09	0	14	125	6931
HLA-B*52:01	0	4	143	6923
HLA-B*53:01	11	76	358	6625
HLA-B*53:02	5	57	350	6658
HLA-B*53:03	22	150	774	6124
HLA-B*53:05	12	81	379	6598
HLA-B*54:01	21	42	236	6771
HLA-B*55:01	3	41	206	6820
HLA-B*55:02	21	52	341	6656
HLA-B*55:04	53	126	606	6285
HLA-B*55:07	21	42	236	6771
HLA-B*55:12	12	54	336	6668
HLA-B*56:01	13	51	296	6710
HLA-B*56:02	20	92	471	6487
HLA-B*56:03	5	125	783	6157
HLA-B*56:04	20	92	471	6487
HLA-B*57:01	18	60	378	6614
HLA-B*57:02	8	57	292	6713
HLA-B*57:03	21	107	420	6522
HLA-B*58:01	32	142	566	6330
HLA-B*58:02	0	6	42	7022
HLA-B*59:01	0	32	267	6771
HLA-B*67:01	30	83	403	6554
HLA-B*73:01	0	8	99	6963
HLA-B*78:01	0	33	238	6799
HLA-B*78:02	0	15	164	6891
HLA-B*81:01	6	34	153	6877
HLA-B*82:01	0	9	116	6945
HLA-B*82:02	0	9	116	6945

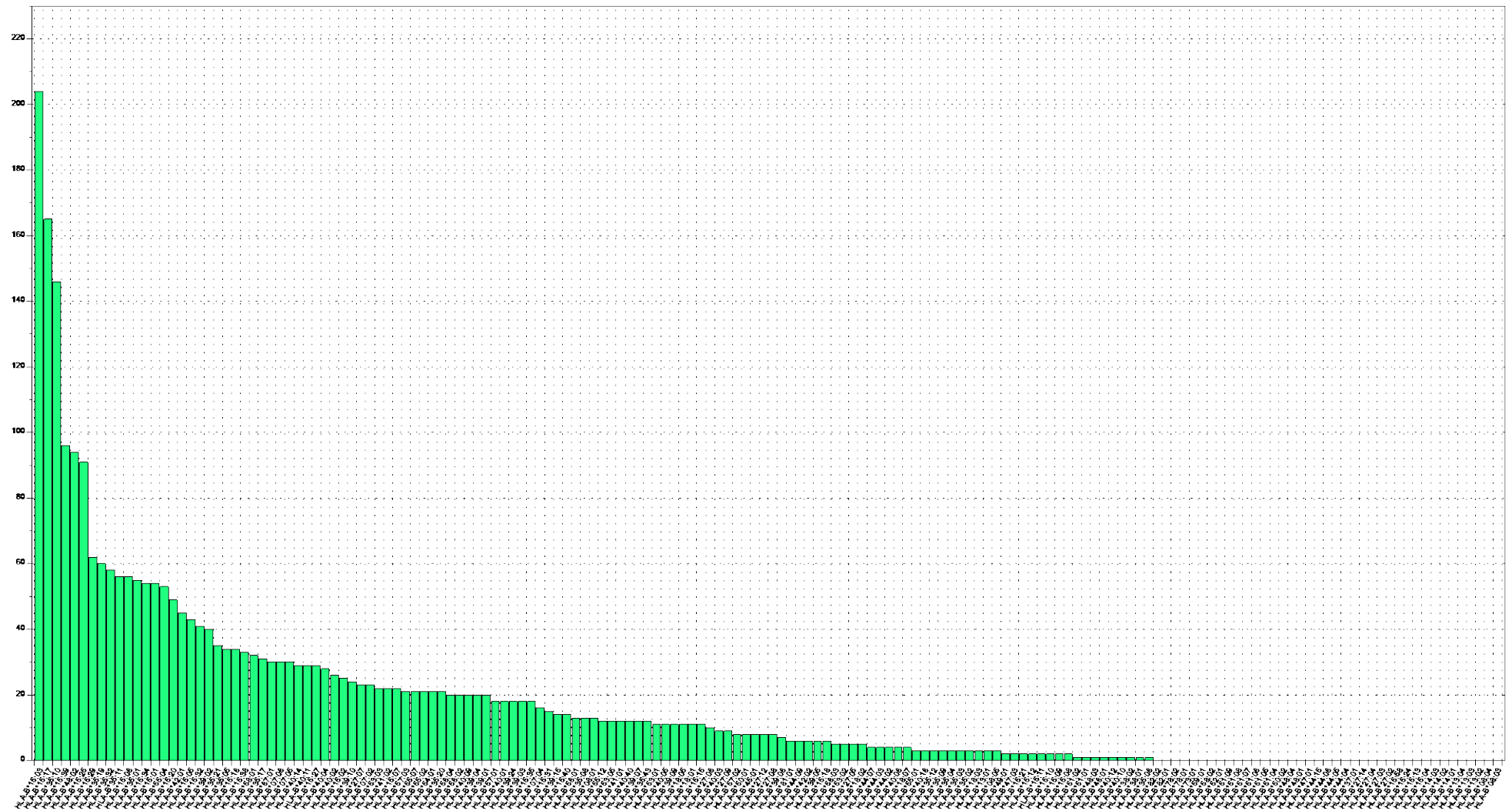
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-B*



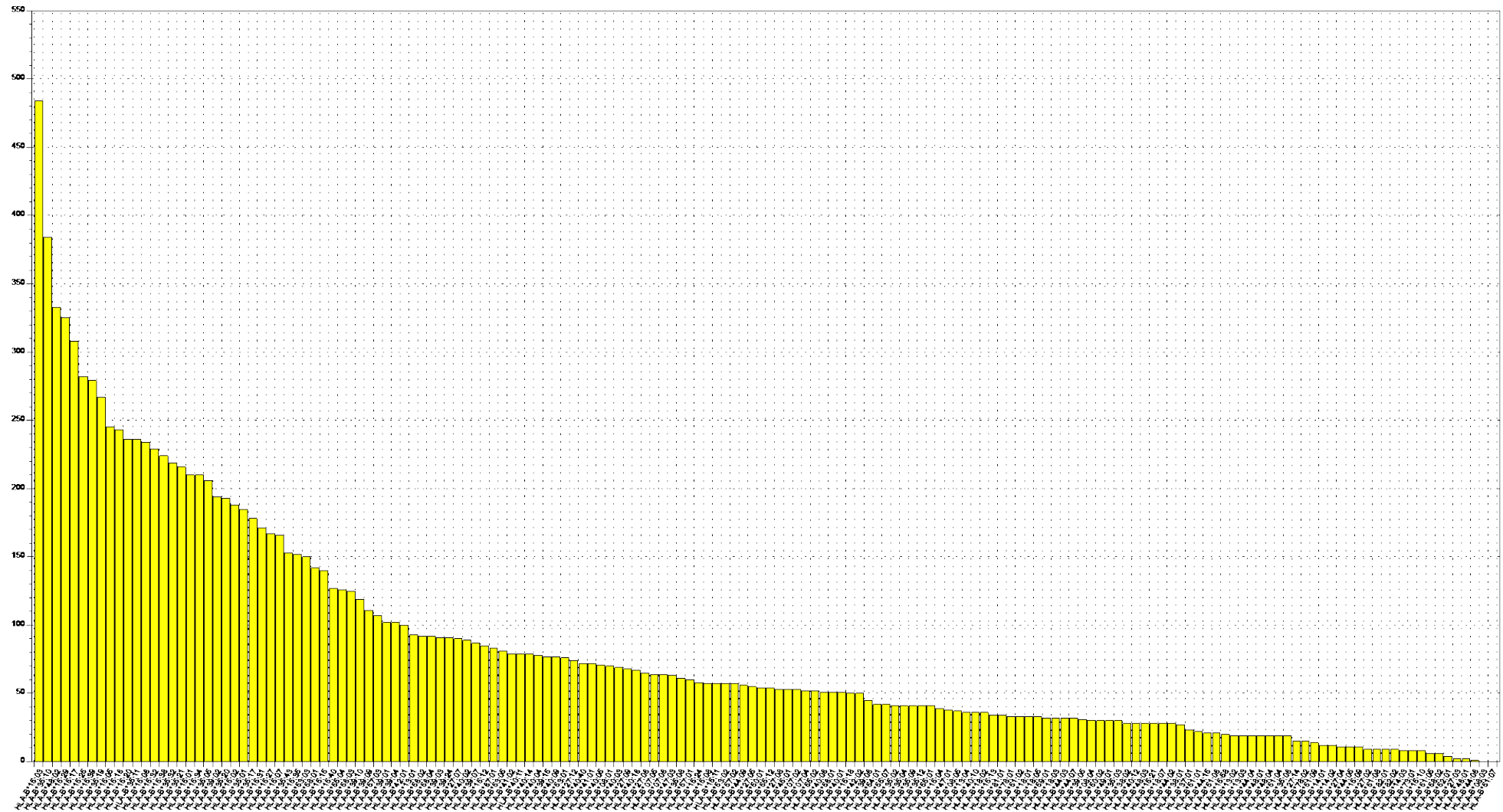
Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 500$ nM) and weak (500 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

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



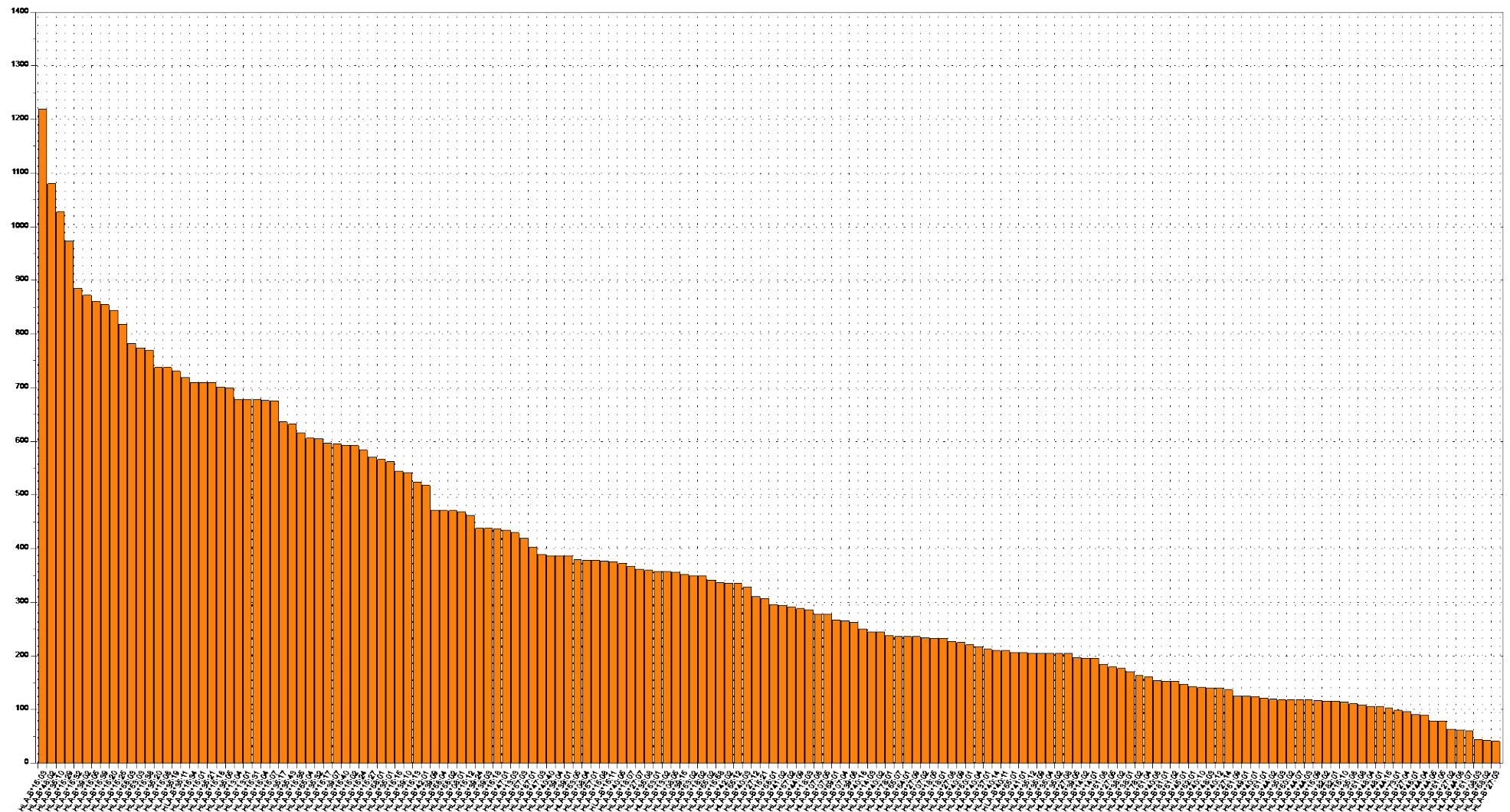
Alleles are ordered on the x-axis by their strong ($IC_{50} \leq 50$ nM) binding prediction and the number of peptides presented are displayed on the y-axis.

HLA-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



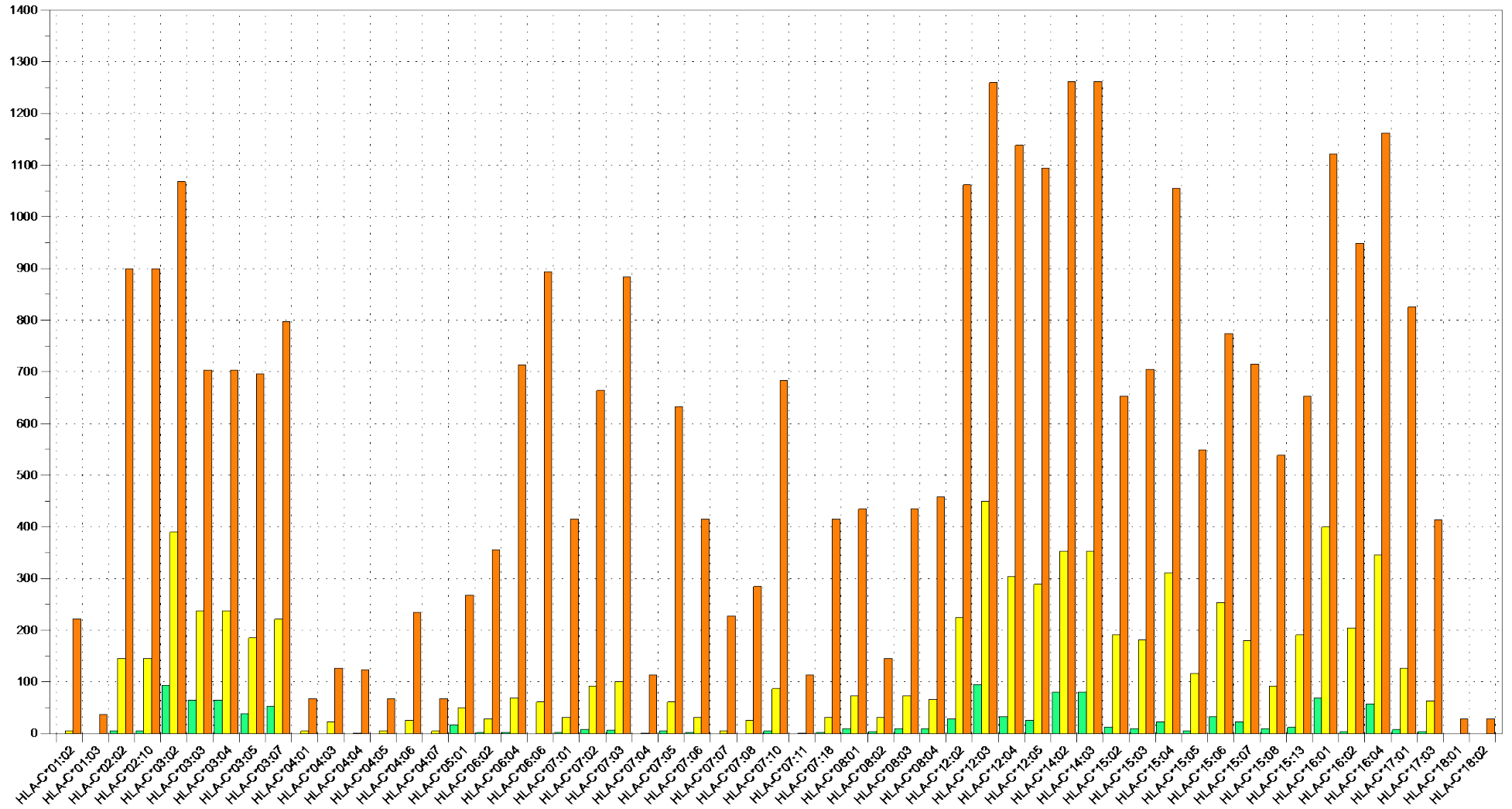
Alleles are ordered on the x-axis by their weak ($500 \text{ nM} < IC_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

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	6	222	6842
HLA-C*01:03	0	0	37	7033
HLA-C*02:02	6	146	900	6018
HLA-C*02:10	6	146	900	6018
HLA-C*03:02	94	390	1068	5518
HLA-C*03:03	65	237	704	6064
HLA-C*03:04	65	237	704	6064
HLA-C*03:05	39	185	696	6150
HLA-C*03:07	53	221	797	5999
HLA-C*04:01	0	5	68	6997
HLA-C*04:03	0	23	127	6920
HLA-C*04:04	0	1	123	6946
HLA-C*04:05	0	5	68	6997
HLA-C*04:06	0	26	235	6809
HLA-C*04:07	0	5	68	6997
HLA-C*05:01	17	50	268	6735
HLA-C*06:02	2	28	356	6684
HLA-C*06:04	3	69	714	6284
HLA-C*06:06	0	61	894	6115
HLA-C*07:01	2	32	415	6621
HLA-C*07:02	8	92	664	6306
HLA-C*07:03	7	101	884	6078
HLA-C*07:04	0	1	113	6956
HLA-C*07:05	5	61	633	6371
HLA-C*07:06	2	32	415	6621
HLA-C*07:07	0	6	228	6836
HLA-C*07:08	0	26	285	6759
HLA-C*07:10	6	87	683	6294
HLA-C*07:11	0	1	113	6956
HLA-C*07:18	2	32	415	6621
HLA-C*08:01	10	74	435	6551
HLA-C*08:02	4	31	146	6889
HLA-C*08:03	10	74	435	6551
HLA-C*08:04	9	66	458	6537
HLA-C*12:02	29	225	1062	5754
HLA-C*12:03	95	449	1260	5266
HLA-C*12:04	33	304	1139	5594
HLA-C*12:05	26	289	1095	5660
HLA-C*14:02	81	353	1262	5374
HLA-C*14:03	81	353	1262	5374
HLA-C*15:02	12	191	653	6214
HLA-C*15:03	10	181	705	6174
HLA-C*15:04	23	312	1055	5680
HLA-C*15:05	6	117	549	6398
HLA-C*15:06	33	254	774	6009
HLA-C*15:07	23	180	715	6152
HLA-C*15:08	10	92	539	6429
HLA-C*15:13	12	191	653	6214
HLA-C*16:01	69	400	1122	5479
HLA-C*16:02	4	205	949	5912
HLA-C*16:04	57	346	1162	5505
HLA-C*17:01	8	126	826	6110
HLA-C*17:03	4	63	413	6590
HLA-C*18:01	0	0	29	7041
HLA-C*18:02	0	0	29	7041

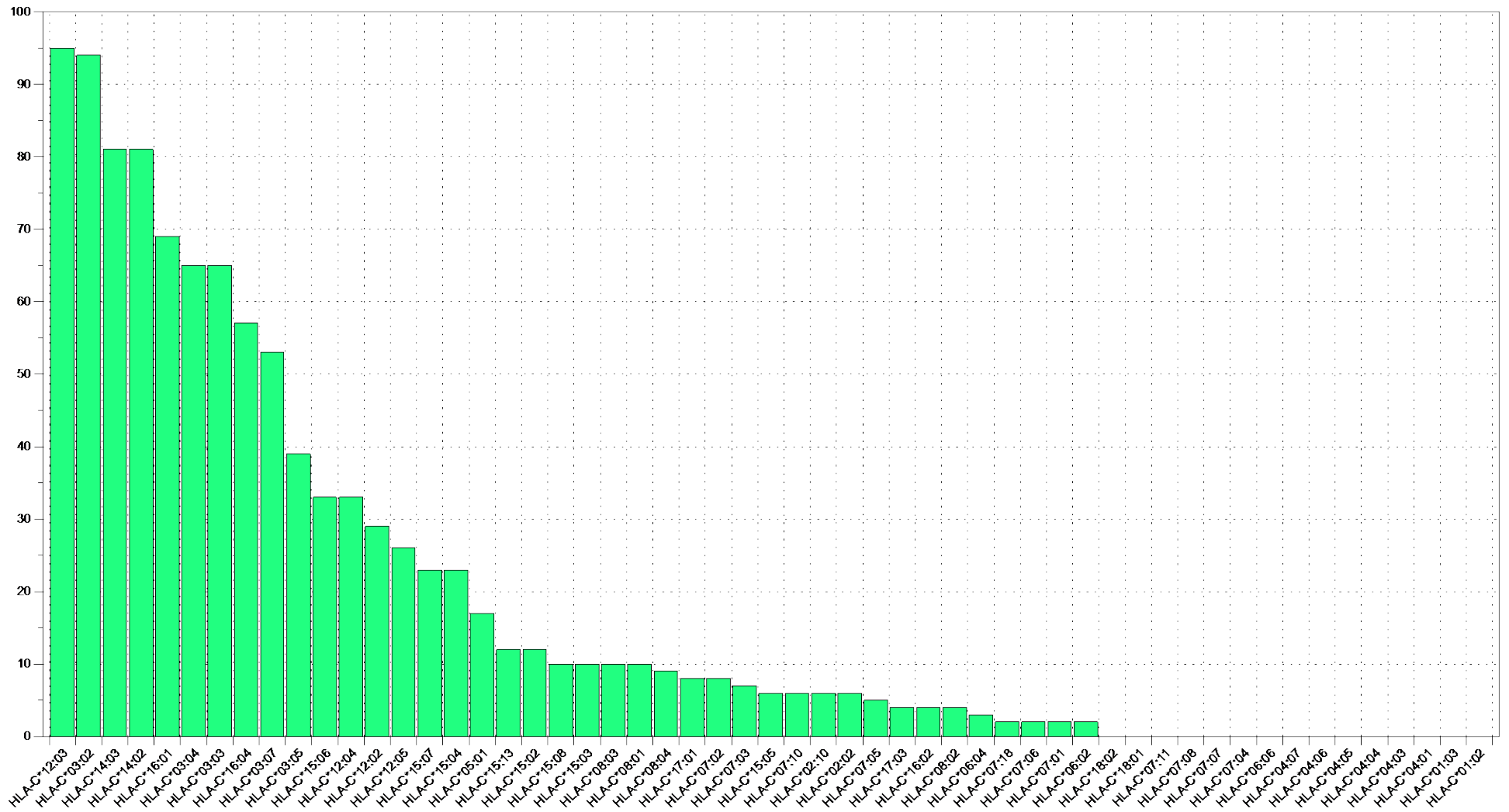
Alleles are ordered alphabetically.

General binding prediction tendencies for HLA-C



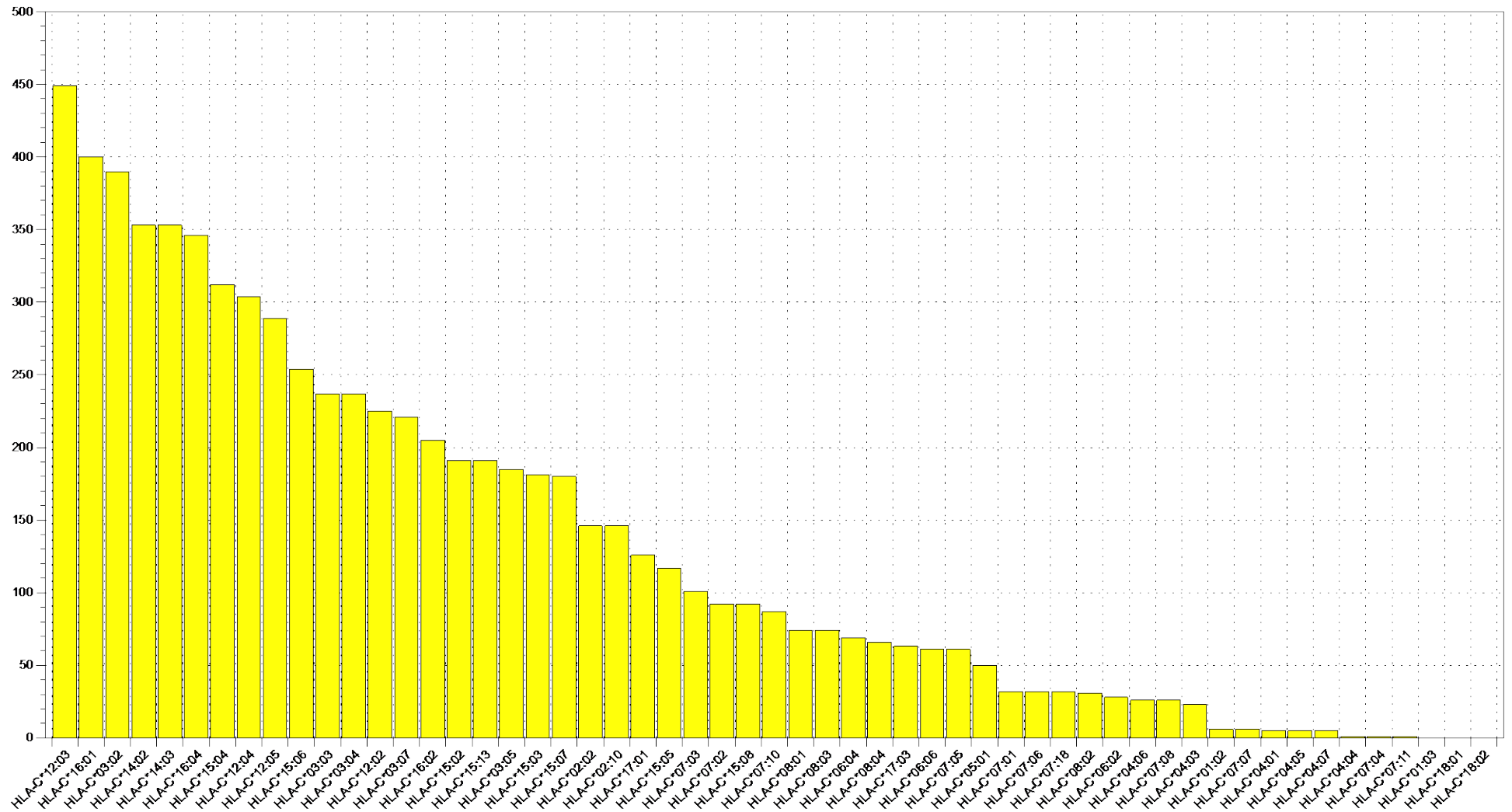
Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular ($50 \text{ nM} < IC_{50} \leq 500$ nM) and weak ($500 \text{ nM} < IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

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



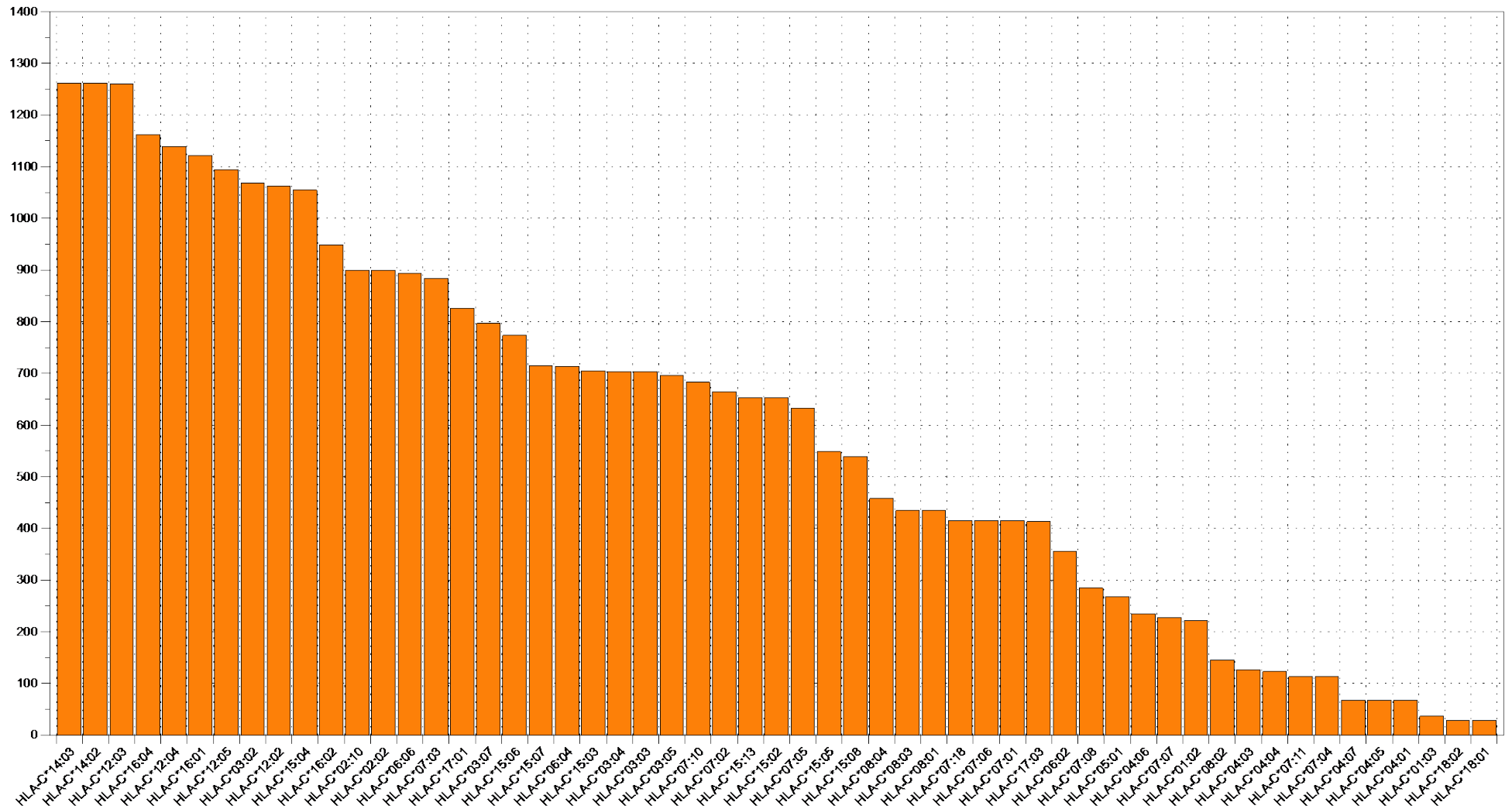
Alleles are ordered on the x-axis by their strong (IC₅₀ ≤ 50 nM) binding prediction and the number of peptides presented are displayed on the y-axis.

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



Alleles are ordered on the x-axis by their regular ($50 \text{ nM} < \text{IC}_{50} \leq 500 \text{ nM}$) 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 nM < IC₅₀ ≤ 5000 nM) binding prediction and the number of peptides presented are displayed on the y-axis.

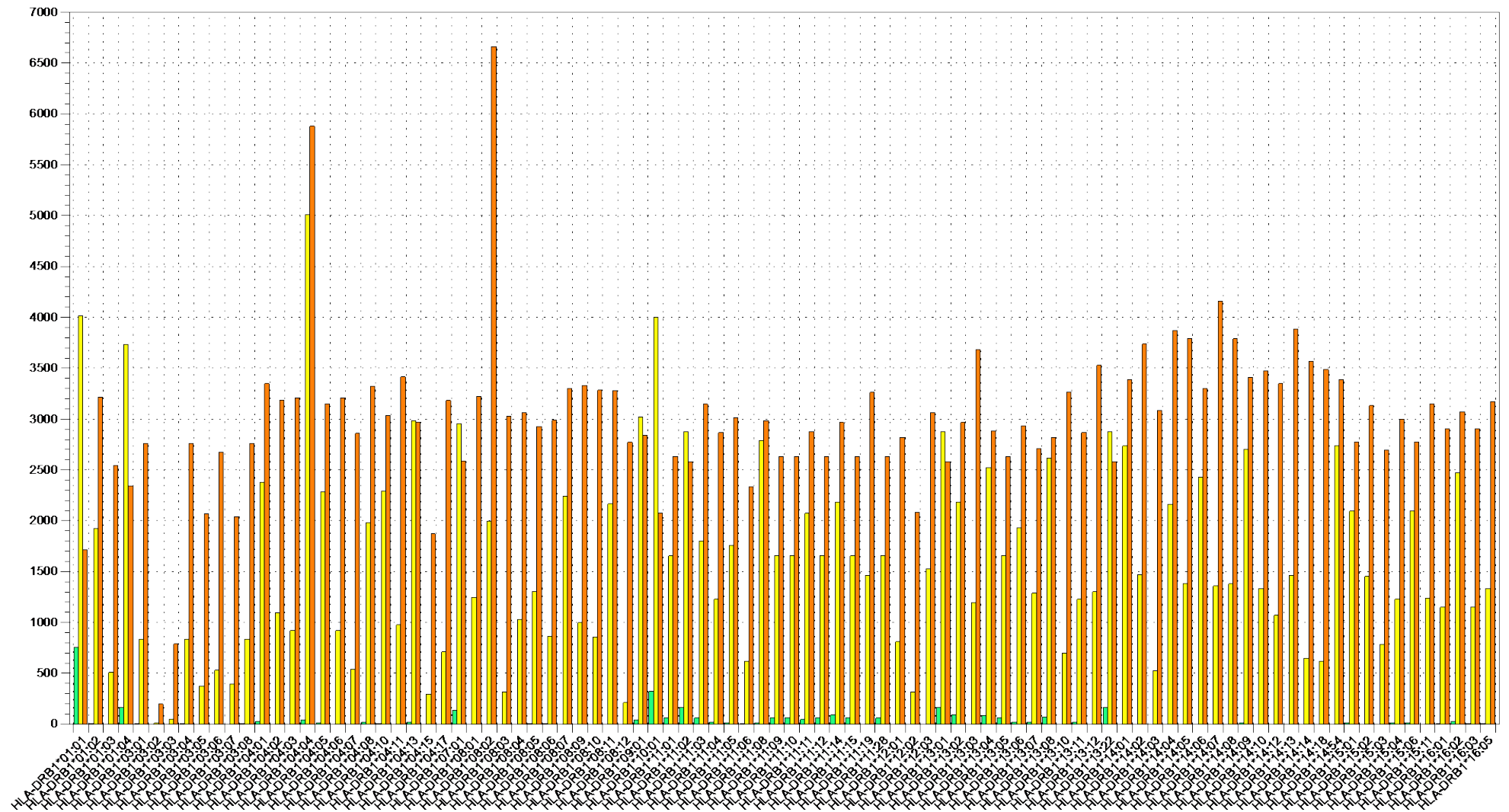
Total number of peptides with strong, regular and weak binding predictions for HLA-DRB1

	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	756	4014	1716	580
HLA-DRB1*01:02	6	1923	3216	1921
HLA-DRB1*01:03	1	507	2542	4016
HLA-DRB1*01:04	164	3732	2339	831
HLA-DRB1*03:01	4	836	2761	3465
HLA-DRB1*03:02	0	12	197	6857
HLA-DRB1*03:03	0	49	791	6226
HLA-DRB1*03:04	4	836	2761	3465
HLA-DRB1*03:05	1	373	2066	4626
HLA-DRB1*03:06	0	528	2677	3861
HLA-DRB1*03:07	0	398	2040	4628
HLA-DRB1*03:08	4	836	2761	3465
HLA-DRB1*04:01	26	2380	3350	1310
HLA-DRB1*04:02	0	1091	3186	2789
HLA-DRB1*04:03	0	919	3210	2937
HLA-DRB1*04:04	22	2504	2941	1599
HLA-DRB1*04:05	16	2282	3146	1622
HLA-DRB1*04:06	0	919	3210	2937
HLA-DRB1*04:07	0	542	2860	3664
HLA-DRB1*04:08	19	1983	3319	1745
HLA-DRB1*04:10	4	2290	3037	1735
HLA-DRB1*04:11	0	975	3413	2678
HLA-DRB1*04:13	19	2983	2972	1092
HLA-DRB1*04:15	0	296	1871	4899
HLA-DRB1*04:17	0	710	3182	3174
HLA-DRB1*07:01	135	2955	2590	1386
HLA-DRB1*08:01	0	1246	3225	2595
HLA-DRB1*08:02	0	998	3331	2737
HLA-DRB1*08:03	0	319	3029	3718
HLA-DRB1*08:04	0	1033	3067	2966
HLA-DRB1*08:05	6	1306	2926	2828
HLA-DRB1*08:06	3	866	2988	3209
HLA-DRB1*08:07	0	2240	3303	1523
HLA-DRB1*08:09	0	998	3331	2737
HLA-DRB1*08:10	0	857	3283	2926
HLA-DRB1*08:11	0	2166	3279	1621
HLA-DRB1*08:12	0	213	2773	4080
HLA-DRB1*09:01	42	3023	2843	1158
HLA-DRB1*10:01	320	3999	2078	669
HLA-DRB1*11:01	63	1656	2633	2714
HLA-DRB1*11:02	162	2876	2580	1448
HLA-DRB1*11:03	61	1804	3146	2055
HLA-DRB1*11:04	20	1228	2868	2950
HLA-DRB1*11:05	10	1755	3013	2288
HLA-DRB1*11:06	4	619	2338	4105
HLA-DRB1*11:08	11	2791	2987	1277
HLA-DRB1*11:09	63	1656	2633	2714
HLA-DRB1*11:10	63	1656	2633	2714
HLA-DRB1*11:11	47	2073	2876	2070
HLA-DRB1*11:12	63	1656	2633	2714
HLA-DRB1*11:14	91	2184	2966	1825
HLA-DRB1*11:15	63	1656	2633	2714
HLA-DRB1*11:19	0	1465	3262	2339
HLA-DRB1*11:28	63	1656	2633	2714
HLA-DRB1*12:01	0	811	2818	3437
HLA-DRB1*12:02	0	313	2084	4669
HLA-DRB1*12:03	0	1527	3061	2478
HLA-DRB1*13:01	162	2876	2580	1448
HLA-DRB1*13:02	91	2184	2966	1825
HLA-DRB1*13:03	0	1194	3682	2190
HLA-DRB1*13:04	88	2522	2886	1570
HLA-DRB1*13:05	63	1656	2633	2714

	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	23	1929	2932	2182
HLA-DRB1*13:07	23	1288	2711	3044
HLA-DRB1*13:08	73	2612	2819	1562
HLA-DRB1*13:10	0	698	3266	3102
HLA-DRB1*13:11	20	1228	2868	2950
HLA-DRB1*13:12	0	1301	3529	2236
HLA-DRB1*13:22	162	2876	2580	1448
HLA-DRB1*14:01	0	2736	3390	940
HLA-DRB1*14:02	0	1469	3738	1859
HLA-DRB1*14:03	0	521	3087	3458
HLA-DRB1*14:04	0	2165	3872	1029
HLA-DRB1*14:05	0	1379	3790	1897
HLA-DRB1*14:06	0	2427	3302	1337
HLA-DRB1*14:07	0	1359	4158	1549
HLA-DRB1*14:08	0	1379	3790	1897
HLA-DRB1*14:09	11	2700	3409	946
HLA-DRB1*14:10	0	1333	3473	2260
HLA-DRB1*14:12	0	1069	3349	2648
HLA-DRB1*14:13	0	1464	3883	1719
HLA-DRB1*14:14	0	650	3567	2849
HLA-DRB1*14:18	0	621	3488	2957
HLA-DRB1*14:54	0	2736	3390	940
HLA-DRB1*15:01	12	2097	2777	2180
HLA-DRB1*15:02	0	1453	3134	2479
HLA-DRB1*15:03	0	782	2696	3588
HLA-DRB1*15:04	16	1229	2998	2823
HLA-DRB1*15:06	12	2097	2777	2180
HLA-DRB1*15:11	1	1240	3148	2677
HLA-DRB1*16:01	4	1151	2907	3004
HLA-DRB1*16:02	27	2472	3070	1497
HLA-DRB1*16:03	4	1151	2907	3004
HLA-DRB1*16:05	7	1332	3169	2558

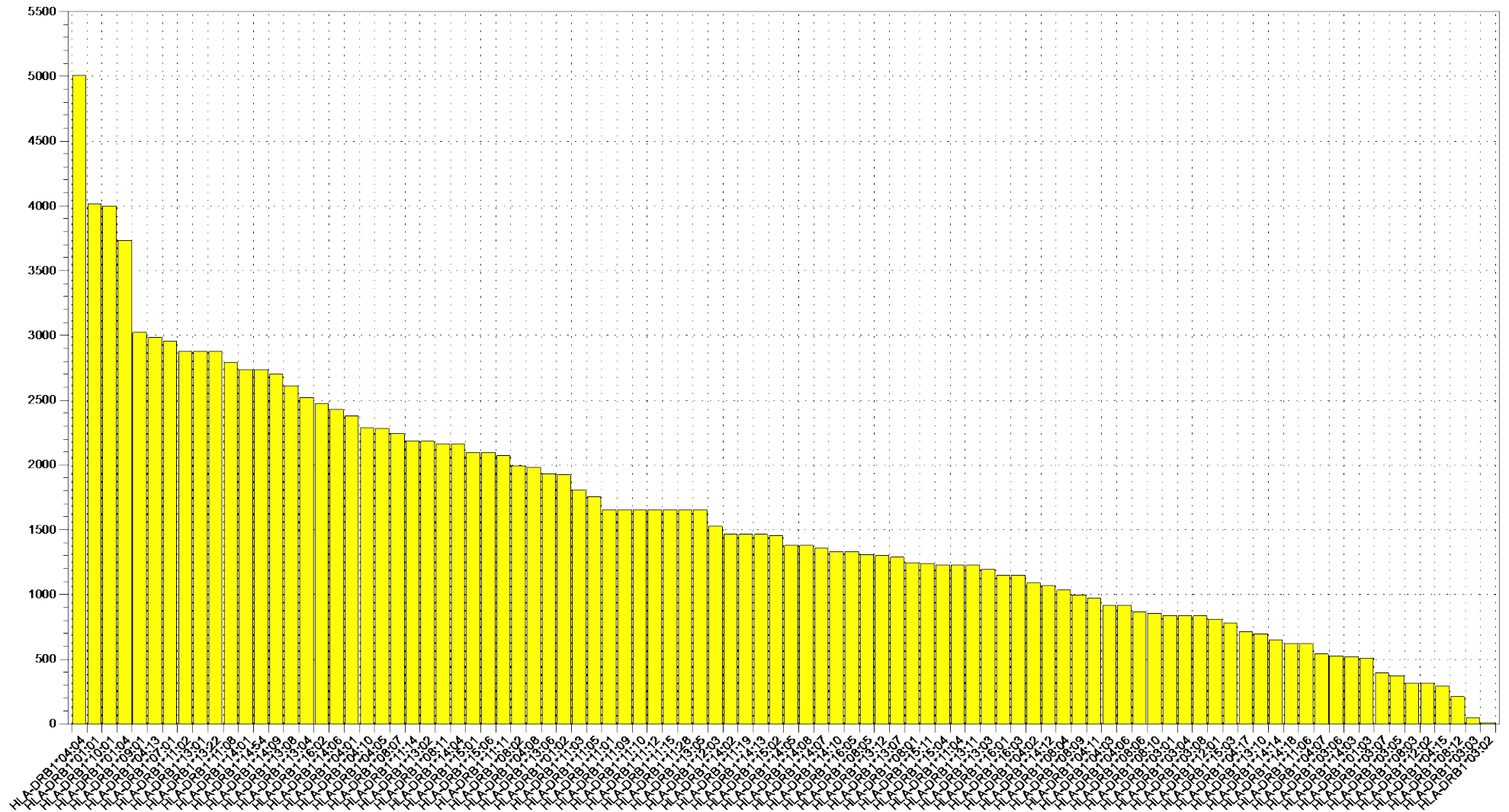
Alleles are ordered alphabetically.

General binding prediction tendencies for *HLA-DRB1*



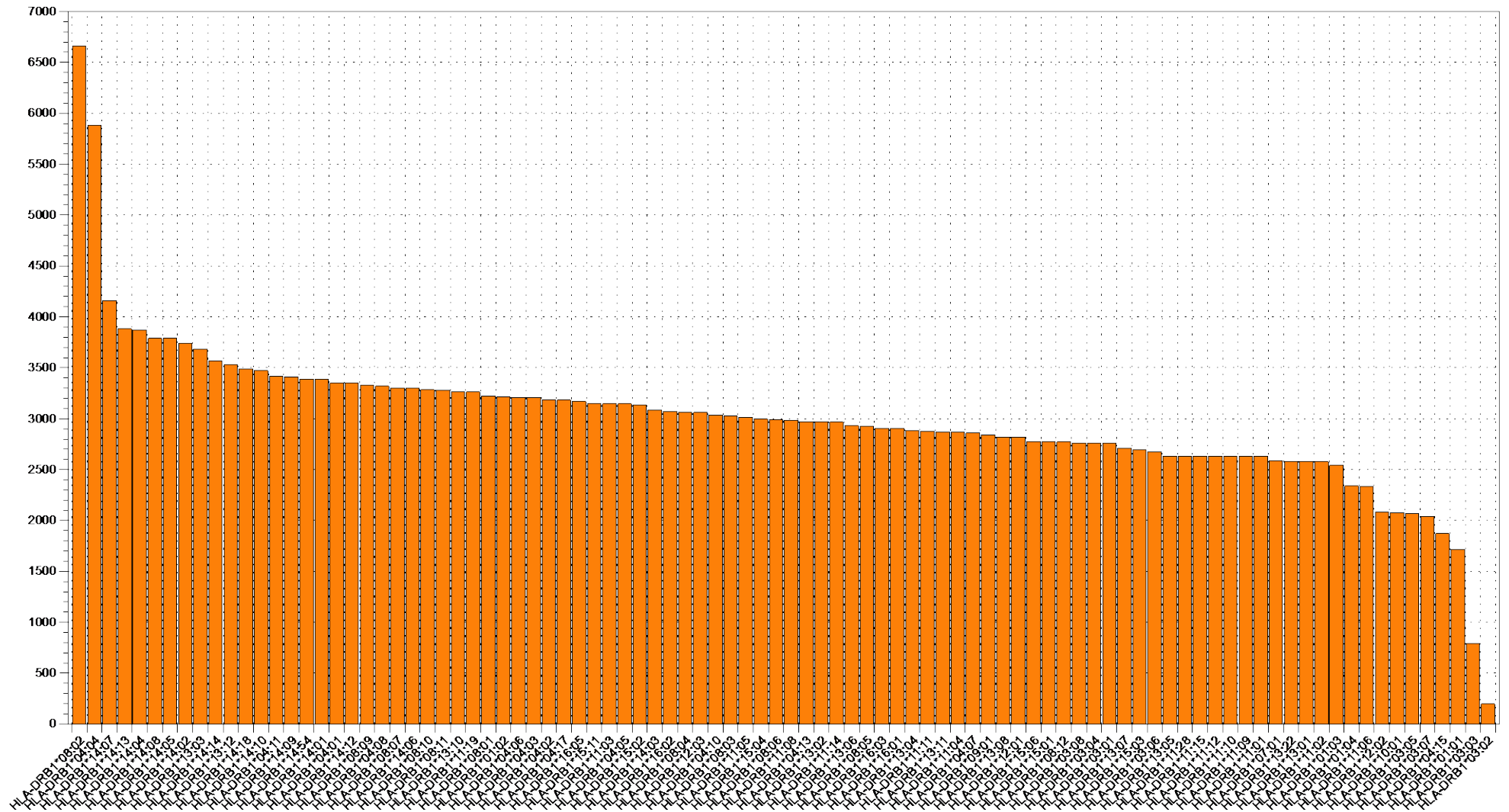
Alleles are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 1000$ nM) and weak (1000 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

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



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



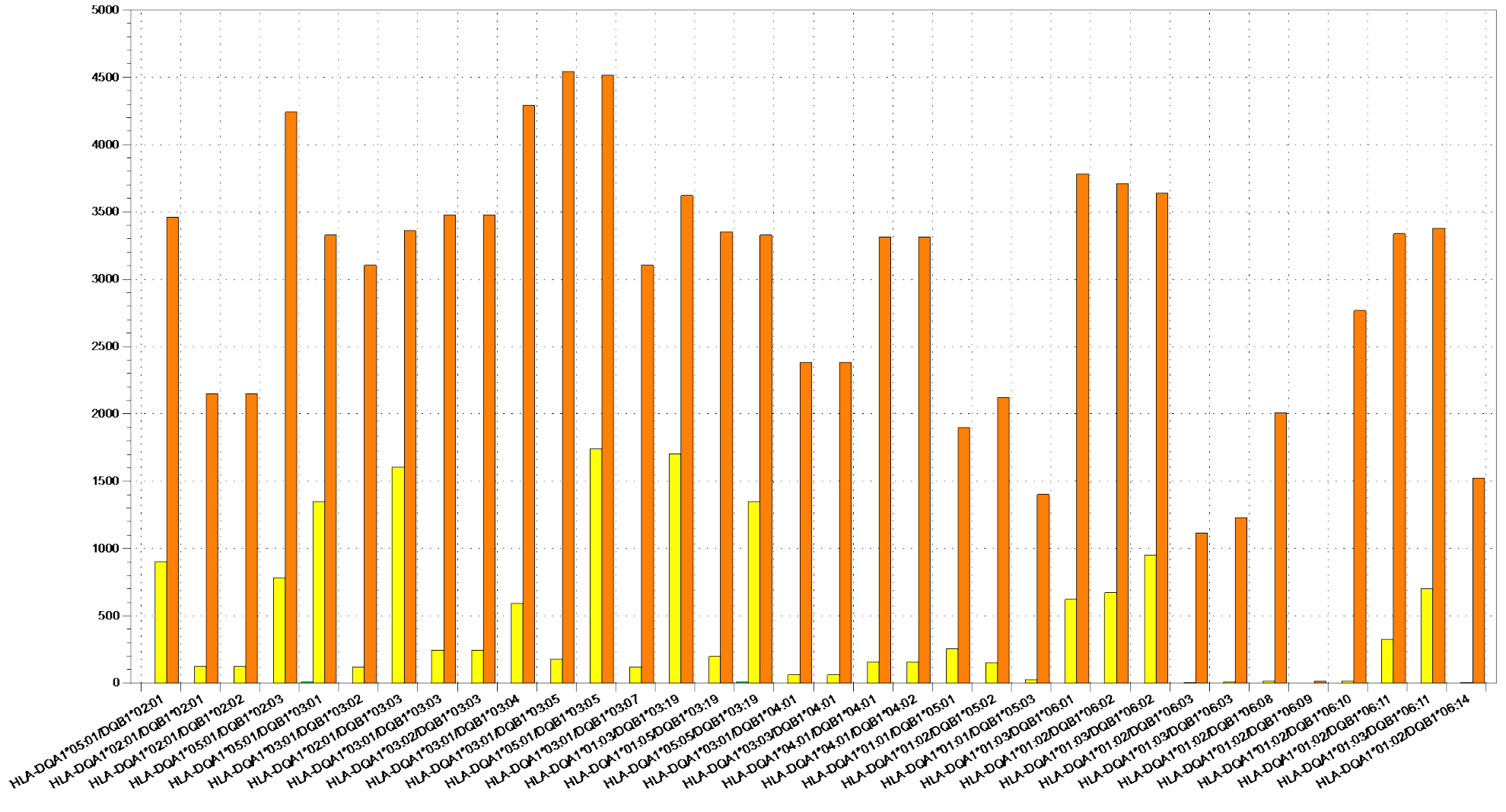
Alleles are ordered on the x-axis by their weak ($1000 \text{ nM} < \text{IC}_{50} \leq 5000 \text{ nM}$) binding prediction and the number of peptides presented are displayed on the y-axis.

Total number of peptides with strong, regular and weak binding predictions for *HLA-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	902	3458	2706
HLA-DQA1*02:01/DQB1*02:01	0	122	2148	4796
HLA-DQA1*02:01/DQB1*02:02	0	122	2148	4796
HLA-DQA1*05:01/DQB1*02:03	0	783	4243	2040
HLA-DQA1*05:01/DQB1*03:01	10	1350	3328	2378
HLA-DQA1*03:01/DQB1*03:02	0	121	3105	3840
HLA-DQA1*02:01/DQB1*03:03	0	1607	3360	2099
HLA-DQA1*03:01/DQB1*03:03	0	245	3475	3346
HLA-DQA1*03:02/DQB1*03:03	0	245	3475	3346
HLA-DQA1*03:01/DQB1*03:04	0	595	4293	2178
HLA-DQA1*03:01/DQB1*03:05	0	176	4542	2348
HLA-DQA1*05:01/DQB1*03:05	0	1743	4517	806
HLA-DQA1*03:01/DQB1*03:07	0	121	3105	3840
HLA-DQA1*01:03/DQB1*03:19	1	1701	3622	1742
HLA-DQA1*01:05/DQB1*03:19	0	198	3352	3516
HLA-DQA1*05:05/DQB1*03:19	10	1350	3328	2378
HLA-DQA1*03:01/DQB1*04:01	0	64	2385	4617
HLA-DQA1*03:03/DQB1*04:01	0	64	2385	4617
HLA-DQA1*04:01/DQB1*04:01	0	156	3312	3598
HLA-DQA1*04:01/DQB1*04:02	0	156	3312	3598
HLA-DQA1*01:01/DQB1*05:01	0	253	1898	4915
HLA-DQA1*01:02/DQB1*05:02	0	150	2122	4794
HLA-DQA1*01:01/DQB1*05:03	0	25	1402	5639
HLA-DQA1*01:03/DQB1*06:01	0	622	3782	2662
HLA-DQA1*01:02/DQB1*06:02	0	672	3711	2683
HLA-DQA1*01:03/DQB1*06:02	0	952	3638	2476
HLA-DQA1*01:02/DQB1*06:03	0	4	1115	5947
HLA-DQA1*01:03/DQB1*06:03	0	9	1227	5830
HLA-DQA1*01:02/DQB1*06:08	0	13	2008	5045
HLA-DQA1*01:02/DQB1*06:09	0	0	16	7050
HLA-DQA1*01:02/DQB1*06:10	0	14	2768	4284
HLA-DQA1*01:02/DQB1*06:11	0	327	3339	3400
HLA-DQA1*01:03/DQB1*06:11	0	703	3381	2982
HLA-DQA1*01:02/DQB1*06:14	0	7	1523	5536

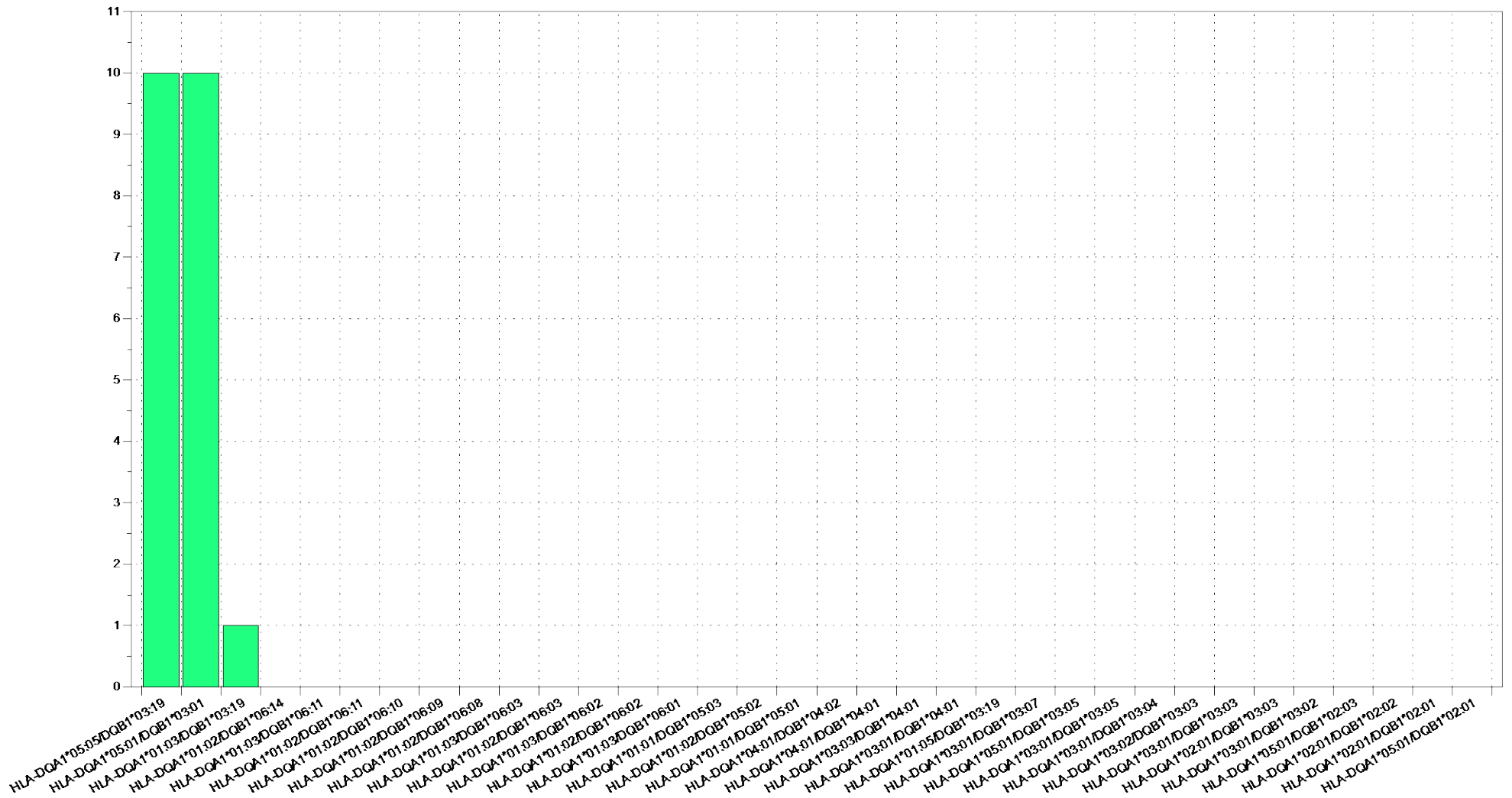
Allele combinations are ordered alphabetically.

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



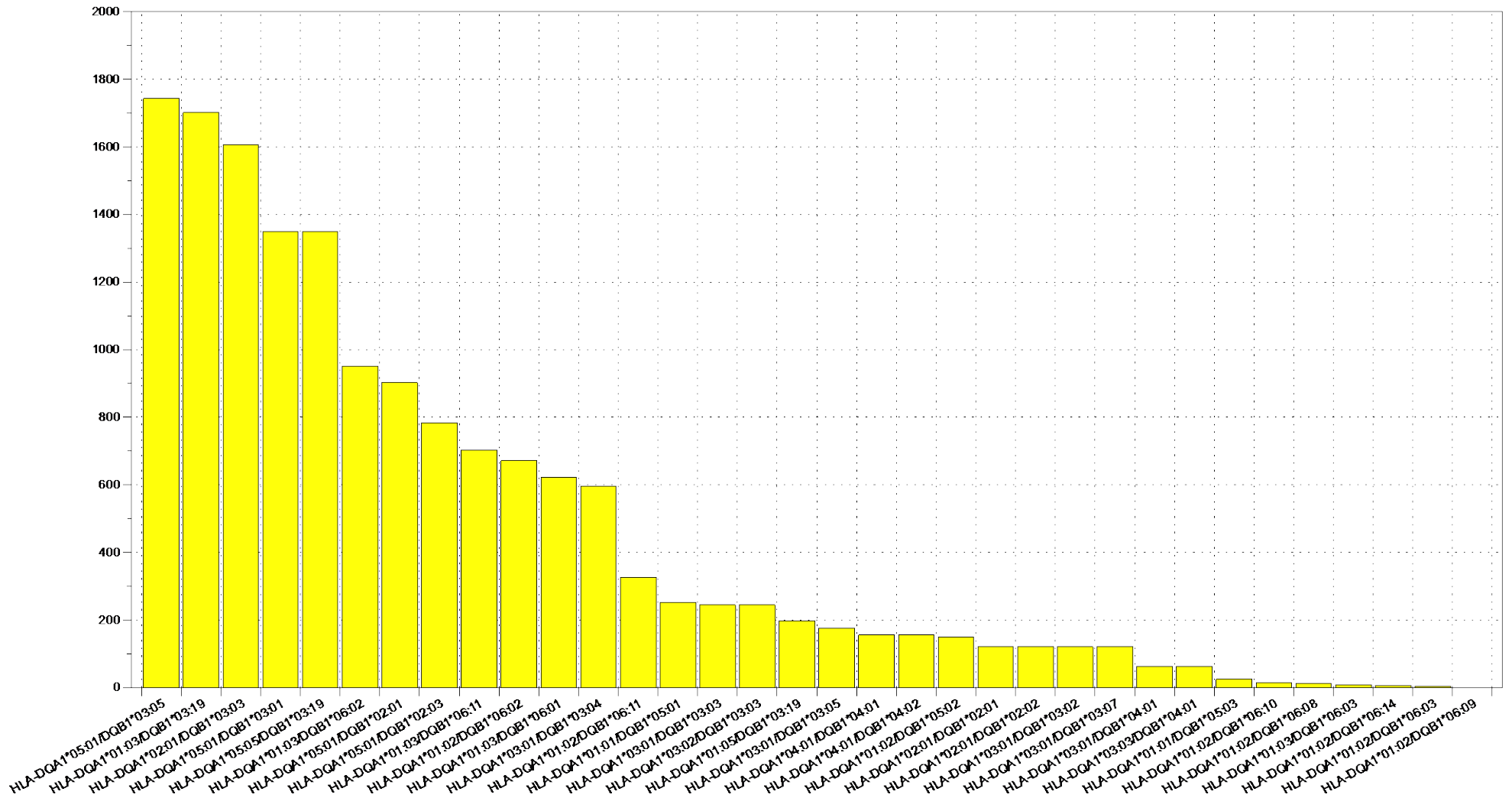
Allele combinations are ordered alphabetically on the x-axis, while the number of peptides binding with strong ($IC_{50} \leq 50$ nM), regular (50 nM $< IC_{50} \leq 1000$ nM) and weak (1000 nM $< IC_{50} \leq 5000$ nM) binding prediction are displayed on the y-axis.

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



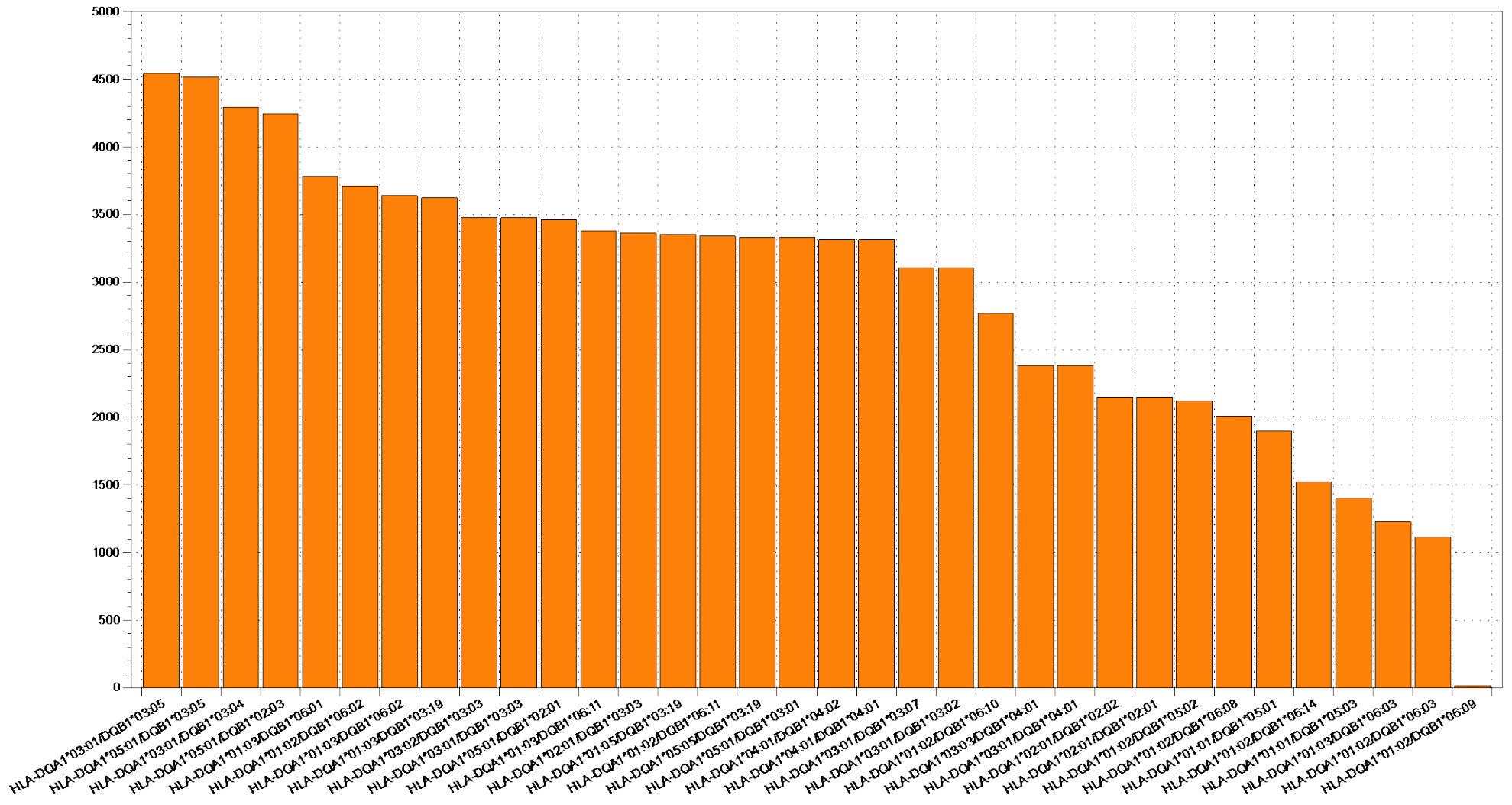
Allele combinations are ordered on the x-axis by their strong ($IC_{50} \leq 50$ nM) binding prediction and the number of peptides presented are displayed on the y-axis.

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 nM < IC₅₀ ≤ 1000 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.