

Supplemental Table 4. List of candidate off-target peptides shared by TCR_{A3a}, TCR_{A3-05} and TCR_{A3-10}, as predicted from peptide scanning of the MAGE-A3₁₆₈₋₁₇₆ target using TnT-TCR cells as effectors, Related to Figure 6.

Pep No.	Protein	Start position	End position	Sequence	Pep No.	Protein	Start position	End position	Sequence	Pep No.	Protein	Start position	End position	Sequence	Pep No.	Protein	Start position	End position	Sequence	Pep No.	Protein	Start position	End position	Sequence	Pep No.	Protein	Start position	End position	Sequence
1	SH2A	243	251	FFIPLTIMV	61	CHSTE	362	370	FAYPLNNVT	121	FNDG8	287	295	ENYPIQITV	181	MAGI1	540	548	QSIPIGASV	241	PK1L2	367	375	FGDPLWQV	301	TFEC	282	290	FSDPLSYFT
2	A16L2	497	505	QVIVPQGRV	62	CLD15	146	154	FFDPLYPGT	122	FR1L6	977	985	QIYVPANI	182	MARE1	234	242	ENDPLQRI	242	PLD5	387	395	ETDPLTFNF	302	THIL	234	242	EVIVPVTIV
3	A1CF	71	79	ELIPLCEKI	63	CND2	240	248	EIDPMFOKT	123	FSD1L	201	209	EIDPVECLV	183	MED6	91	99	QVIVLADYY	243	PP1R8	107	115	QQIPIDISTV	303	TIF1A	924	932	FQDPVPLTV
4	AAK1	917	925	EFDPIPVLI	64	CNOT1	710	718	QIDPLAGMT	124	GATA1	76	84	QVYPLNQM	184	MEFV	319	327	EGDPPVGTG	244	PPM1H	298	306	EIIPMSSEF	304	TIGIT	138	146	FQIPLGLAM
5	ABCAC	531	539	QIPIPIEAM	65	CNOT4	377	385	ETIPVSSST	125	BG55	44	52	QHDPLLTGV	185	MGST2	58	66	EYPIIFIT	245	PR14L	705	713	GTPIQITKI	305	TITIN	24337	24345	ESDPIVAQY
6	ABCG4	858	866	QAIPLMQNT	66	CNOT9	162	170	EIIPCLRLI	126	GFP2T	217	225	EQIPLVYRT	186	ANDA	208	216	QNDPVTVVV	246	PRC2B	1957	1965	QQIPILSHT	306	TKFC	128	136	EQIPIVMAV
7	ABCG4	357	365	EVDPIESHT	67	CNTN3	524	532	QNDPLLDII	127	GLT16	270	278	EQIPLQKQM	187	MOC51	549	557	QIPLCHHV	247	PRD16	862	870	FMDPIYSRV	307	TML1L	446	454	EFDPLAPAV
8	ABEC4	259	267	ESYPLNNAF	68	CO6A6	1892	1900	EIIPVVTTF	128	GPR18	196	204	FLIPLFIMI	188	MOD5	85	93	FVDPLVTNY	248	PRDM6	184	192	EIIPLNQHT	308	TMM62	539	547	FNILPMAYM
9	ACACA	2174	2182	EIIPYHQV	69	COG4	351	359	ELDPILTEV	129	GRH1L	257	265	QYYPVTLRT	189	MORC1	570	578	QIPIVDEIT	249	PRDX1	42	50	FFYPLDFTF	309	TPC11	993	1001	ENIPIITTV
10	ACADM	59	67	EIIPVAAEY	70	COO5	265	273	QIPIVLGEV	130	GRA1A	531	539	FLDPLAYEI	190	MROH8	70	78	QDPLSEAI	250	PRS10	114	122	EVDPLVYNM	310	TR49B	22	30	RIDPVTIDC
11	ACLT7A	231	239	EGYPLPSIT	71	CP2A6	390	398	EVYPLQSV	131	GS2T	110	118	FGIPLWQV	191	MTFR2	56	64	EIULPLNSV	251	PTPRB	1131	1139	QVDPVQSOF	311	TR64C	22	30	RIDPVTIDC
12	AEBP1	916	924	QGIPIANAT	72	CP3A5	215	223	FLDPLFLSI	132	GTDC1	51	59	QTIPISEHY	192	MKRA5	1804	1812	QNIPIVMSST	252	PUR6	92	100	EMPIEWVC	312	TRI11	23	31	FIDPVTMDC
13	AFAF	1217	1225	EAYPIPTQT	73	CPED1	371	379	FMYPVVLQV	133	HACD3	299	307	QSIPIFNET	193	MKRA5	2544	2552	FHDPISEKI	253	RAS4B	289	297	QIPLUEET	313	TRI17	23	31	FIDPVTMDC
14	AGRE4	300	308	FMYPVYGGI	74	CPLN1	363	371	ERIPLHPLI	134	HDAC4	996	1004	ELDPLPEKV	194	MY15B	737	745	EAIPLAPGI	254	RBBP6	365	373	QODPLMPV	314	TRI41	27	35	FIDPVTISGC
15	AGRG6	716	724	QVDPPLASVI	75	CPLN1	2416	2424	QIPLLENLI	135	HD	2801	2809	QIPIVISDY	195	MYB8	388	396	ELIPISPST	255	RBM25	753	761	FAYPLDWSI	315	TR51	22	30	FLDPVTIDC
16	AGRL1	42	50	EGYPIELRC	76	CRBG3	1635	1643	EVIPMMPEV	136	HELQ	1009	1017	ELIPLMEVT	196	MYO1H	174	182	QGIPVGGHI	256	RBP1	190	198	FGIPLADAV	316	TR58	267	275	ENIPLMET
17	AGRL3	37	45	ESYPIELRC	77	CRBG3	1708	1714	EVIPPLVTAM	137	HELZ2	612	620	QTDPLVTLQY	197	MYO22	242	250	ENIPIVIT	257	RELCH	541	549	ELIPLILCT	317	TRIM4	19	27	FQDPVSEIC
18	ALPK3	1702	1710	EIIPLYIELY	78	CRBN	79	87	QVIVPLPQV	138	HERC1	4283	4291	QQIPLVLAGV	198	NCHL1	145	153	EGDPIPLVC	258	RELN	1226	1234	QIIPVINPT	318	TRIO	2687	2695	FVILPSEVT
19	AMPE	711	719	ELYPMEEY	79	CSD1	279	287	QNDPLPGRI	139	HERC1	4647	4655	EMIPDLDSFV	199	NELFD	571	579	EQIPLVTER	259	REVL3	2317	2325	EFDPICALF	319	TSH1	466	474	QIPIPPPTT
20	AN13A	377	385	QVPIIIDL	80	CSKP	767	775	FAYPIPHIT	140	HEXD	82	90	EVIPLVQTF	200	NEMF	388	396	QGDPVASAI	260	RFP13	118	126	ELDPLFSWT	320	TSB8	95	103	FSYPIVASC
21	AN08	980	988	QIPLQKGF	81	CSPG2	1360	1368	ETDPIVHLM	141	HMCN1	994	1002	EGIPVTLPC	201	NEMF	995	1003	FAIPICAPY	261	RGP2A	1369	1377	ELIPLTARM	321	TT21A	441	449	QIPIVSGEY
22	ANR16	147	155	EGDPIQLQY	82	CTR4	540	548	EQIPLMLI	142	HNR3C1	250	258	EGDPLDDVD	202	NEP1	178	186	FSIPIVSDV	262	RHAG	49	57	ELYPLFQDV	322	TT30A	438	446	ENYPIVMEK
23	ARRD2	143	151	QIPIILSI	83	CWC22	121	129	ELDPLLLTF	143	HRF9	86	94	FOIPLVVPY	203	NFE2	174	182	EMYPVPEY	263	RIPR1	720	728	QADPMAPRT	323	TT30B	438	446	ENYPIVMEK
24	ARRD1	328	336	FLDPVFLST	84	DDX1	56	64	FSIPIVQIV	144	HSF2	259	267	ENIPIVPIET	204	NRP2	169	177	EPYPPPPY	264	RM1	62	70	EGIPLPTKI	324	TTC14	535	543	ECYPIVPANT
25	ARRD2	199	207	EVIPVFAEI	85	DDX23	445	453	FLIPLLVMI	145	HSF7E	365	373	EVIPGAI	205	NLGNX	497	505	ELIPIMGPT	265	RM40	81	89	ELIPIEDFI	325	TTLL2	176	184	QIPLVTFM
26	ARRD4	210	218	EAIPIYIAEI	86	DDX24	247	255	FAIPIMAEI	146	IDO	43	51	QQIPLVWQC	206	NMES1	12	20	ELIPLVVMF	266	RNF37	263	271	FLDPILEI	326	TWF2	246	254	EGDPLESVV
27	ARSG	18	26	FLYPLVDFC	87	DDX46	224	232	ELDPLDAYM	147	IFNA2	74	82	ETIPLVHEM	207	NOX3	397	405	FHYPPVVCV	267	RP1	1070	1078	QVDPIDEEET	327	TX13C	154	162	QVYPPMPDF
28	ASHL	2748	2756	EIIPLEAVV	88	DENB8	427	435	EGYPIVSGC	148	IGSF2	35	43	EGYPIVSGC	208	NPBW1	212	220	FAPVSTIC	268	RPA82	86	94	ETDPLLIAM	328	UBE2W	76	84	ENIPIVPHV
29	AT11B	351	359	FIRIPLSVI	89	DHX9	1123	1131	QLDPLNEM	149	IGSF3	159	167	EQDPLELTC	209	NTRK2	609	617	EGDPLIMF	269	RRBP1	1284	1292	EQDPLVQKT	329	UBP38	242	250	QHILPQMT
30	AT11C	356	364	FIRIPLSVV	90	DIP2A	1561	1569	ELDPIVYV	150	ILTRA	237	245	EMDPIILLT	210	NLBP1	197	205	ENIPIGTAG	270	RS4B6	527	535	EGIPLVLELV	330	UBP8	658	666	FLDPIGTGF
31	AT134	544	552	QGDPLDLQM	91	DIP2B	426	434	EVIPVPIEV	151	IQCN	341	349	QTVPVVST	211	NUMB	509	517	QSYPIVANGM	271	RUSD2	494	502	ETDPLCAEC	331	URAS1	24	32	ELIPLVALRV
32	ATP7A	660	668	FCIPLVAGLM	92	DLG1	822	830	QIPIYISFI	152	IRF6	393	401	QVIVPVARM	212	OS1A7	27	35	QIPIVLMQ	272	S12A3	487	495	QIPLVIGFF	332	UTP20	2326	2334	FRIPLQMT
33	ATP7B	660	668	FGIPLVMAIM	93	DLG2	788	796	QIPIYIAFI	153	ITAF8	1008	1016	FSIPLWII	213	ODAM	107	115	QVDPQLQGT	273	S15A1	10	18	FGYPLSIF	333	VAFNB	87	95	EMYPVPPIIT
34	B3A3	930	938	FGIPLISLV	94	DLGP1	61	69	FSDPLASST	154	ITB7	148	156	EGYPLVDLY	214	OMA1	510	518	EQIPLTVV	274	SBA20	117	125	FQDPLWVSV	334	VATA	417	425	FSDPVTSAT
35	B3GN7	321	329	ELYPIDDVF	95	DNAI3	38	46	EIYPLDVLTT	155	JAK2	34	42	QIDPVLQVY	215	OPLA	732	740	QLDPIQLSI	275	SCAF4	349	357	QODPMHQQV	335	VLDLR	126	134	QIPIVSWRC
36	B3GN8	64	72	QIPLPFAY	96	DND1	73	81	QLIPLQFQV	156	JIP4	919	927	FTDPLGVQI	216	OPRK	235	243	FVPIVLII	276	SCAM1	256	264	QNIPIVGIMM	336	VW5B1	49	57	FVYPLDECT
37	BCL7C	179	187	EAYPVFEPV	97	DSCAM	714	722	EGYPPVFTV	157	K1210	525	533	QGYPMASAY	217	OPSD	212	220	FTIPIIIF	277	SCAP	284	292	ELIPLVTTY	337	WASH1	188	196	FLDPLAGAV
38	BDH	225	233	EMYPVGVKV	98	DUS18	82	90	FFDPIADHI	158	K154L	1245	1253	EVIPVTQET	218	OR1Q1	23	31	EQIPLFLVF	278	SCN1A	788	796	EHYPMTHF	338	WDFY4	313	321	EGYPLLLKV
39	BEND4	348	356	ESIPVPOQT	99	DUS21	84	92	FFDPIADHI	159	KALRN	2853	2861	QGIPLVSLGT	219	OR2J1	252	260	FRIPVCMY	279	SCN2A	779	787	EHYPMTEGF	339	WDR27	491	499	EAYPVECAV
40	BRWD3	1007	1015	FLDPISGKM	100	DYH11	3798	3806	EIDPLELDF	160	KCNK1	139	147	FGIPLMLFV	220	OR6K4	202	210	FSIPIQIT	280	SCN4A	598	606	EHYPMTEHF	340	WFS1	343	351	FFIPLVIFY
41	BUD13	541	549	EGDPMANFI	101	DYH7	836	844	QHILPQIV	161	KDM2A	303	311	FNIPMLQKI	221	OR6K6	55	63	FFIPLLLIY	281	SCNNA	110	118	FSYPSVLN	341	XPO2	40	48	QNYPLLLLT
42	C19L1	418	426	QVIVPVISC	102	EED	107	115	EGDPLVFAT	162	KDM7A	486	494	QGIPVPCV	222	P2Y14	23	31	QIIPVLFI	282	SHG1	139	147	FIDPLQNLG	342	XPO2	913	921	EHDPIVGMV
43	C1TC	748	756	FGIPLVAV	103	EFS	373	381	EGIPIMAEY	163	KI67	1255	1263	QSDPVDTP	223	P3C2A	196	204	FSYPLTPAT	283	SIGL7	48	56	FSYPSVDSQT	343	XPO7	741	749	ENIPLINQI
44	C1TC	899	907	FLYPLVGT	104	ELF5	26	34	FCDPLMSWT	164	KICS2	3	11	ESIPLAAPV	224	P4K2B	274	282	EADPLFNI	284	SIK3	341	349	QVDPVLENDV	344	ZC3H6	438	446	QIDPVMMAET
45	C1TM	942	950	FYPLVGT	105	EM55	310	318	FVYPPVYTT	165	KLF14	114	122	FSDPIPCSV	225	PAMR1	142	150	ESYPLNAHC	285	SLC31	182	190	EVDPIFGTM	345	ZDH5C	196	204	FFIPLVAGLT
46	CAR10	936	944	EYPIVHIV	106	ENR1	353	361	FTDPIVELT	166	KLH40	444	452	ESDPLPYV	226	PAR11	139	147	QLIPLHNT	286	SLIP	608	588	QIDPVFGSI	346	ZDH8C	196	204	FFIPLVGLT
47	CATP1	238	246	EQIPIVSCY	107	EOGT	92	100	FGYPPVSYV	167	KPFB	401	409	EGYPPVVPKY	227	PC11X	372	380	ENIPLNTKI	287	SNTG1	294	302	EQDPLQDRV	347	ZMYM2	902	910	QNI