

Supporting Information

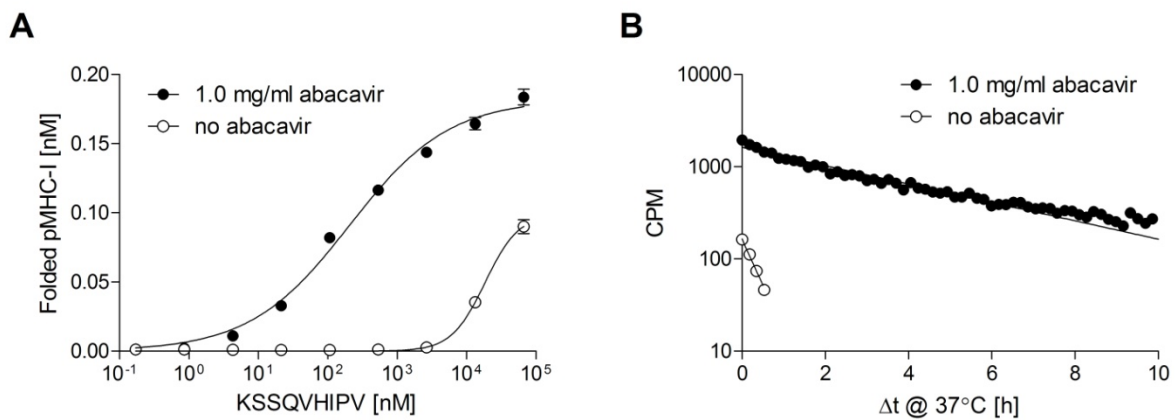


Figure S1: Binding of pep-V to B*57:01 in AlphaScreen and dissociation assay.

A) The affinity of pep-V (KSSQVHIPV) to biotinylated recombinant B*57:01 was determined with and without adding 1.0 mg/ml abacavir using an AlphaScreen receptor binding assay (1) based upon streptavidin coated donor-beads and W6/32 (anti-HLA class I antibody) coated acceptor-beads. In the presence of abacavir peptide KSSQVHIPV was a good binding peptide, $K_D=207$ nM, whereas in the absence of abacavir peptide KSSQVHIPV was a very weak binder, $K_D=18,000$ nM. **B)** Bound HLA-B*57:01: pep-V complexes are detected in a scintillation proximity assay (SPA, (2)) using radiolabelled B2m and recombinant biotinylated MHC in a streptavidin coated SPA microplate. The signal is generated when B2m* is bound to the bottom of the plate which only occurs in presence of a bound peptide. The dissociation measurement is started by adding excess of unlabelled B2m and raising the temperature to 37C. Measurements are made in 17 minute intervals, creating a dissociation curve. **Table S3** compares different dissociation curves of combinatorial peptide libraries using the area under the dissociation curve (AUC) as a metric divided by the AUC value of the completely randomized library and normalized to an average value of 1.

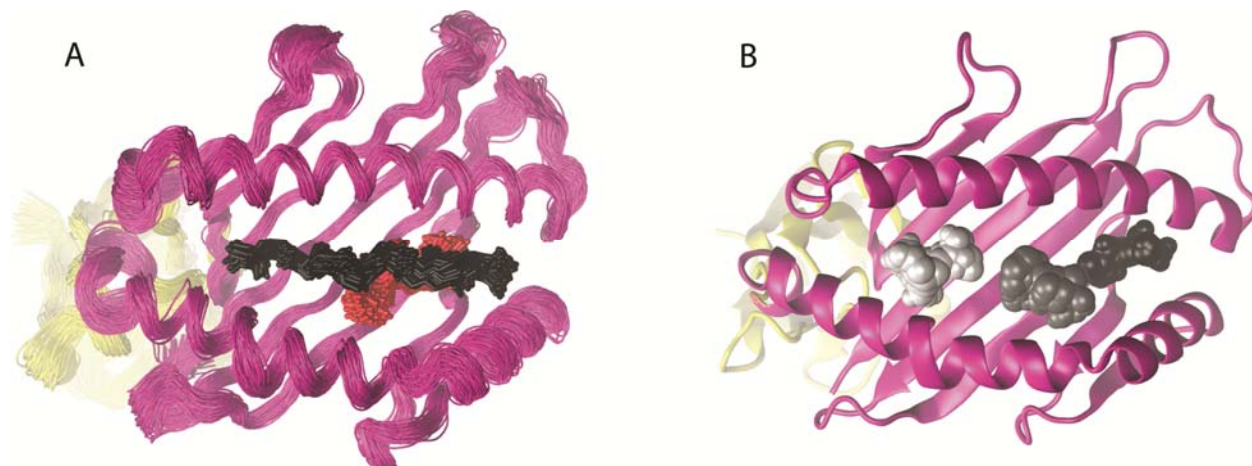


Figure S2: Computational identification of a binding site for abacavir in HLA-B*57:01. Panel **A** depicts three potential binding sites for abacavir identified by computational solvent mapping (gray spheres). Panel **B** depicts an ensemble of 100 equally spaced configurations of the complex taken from 30ns of molecular dynamics simulation. Simulations indicate a stable complex on the timescale of the simulation with abacavir localized to the F-pocket, consistent with the subsequent crystal structure (Figure 3).

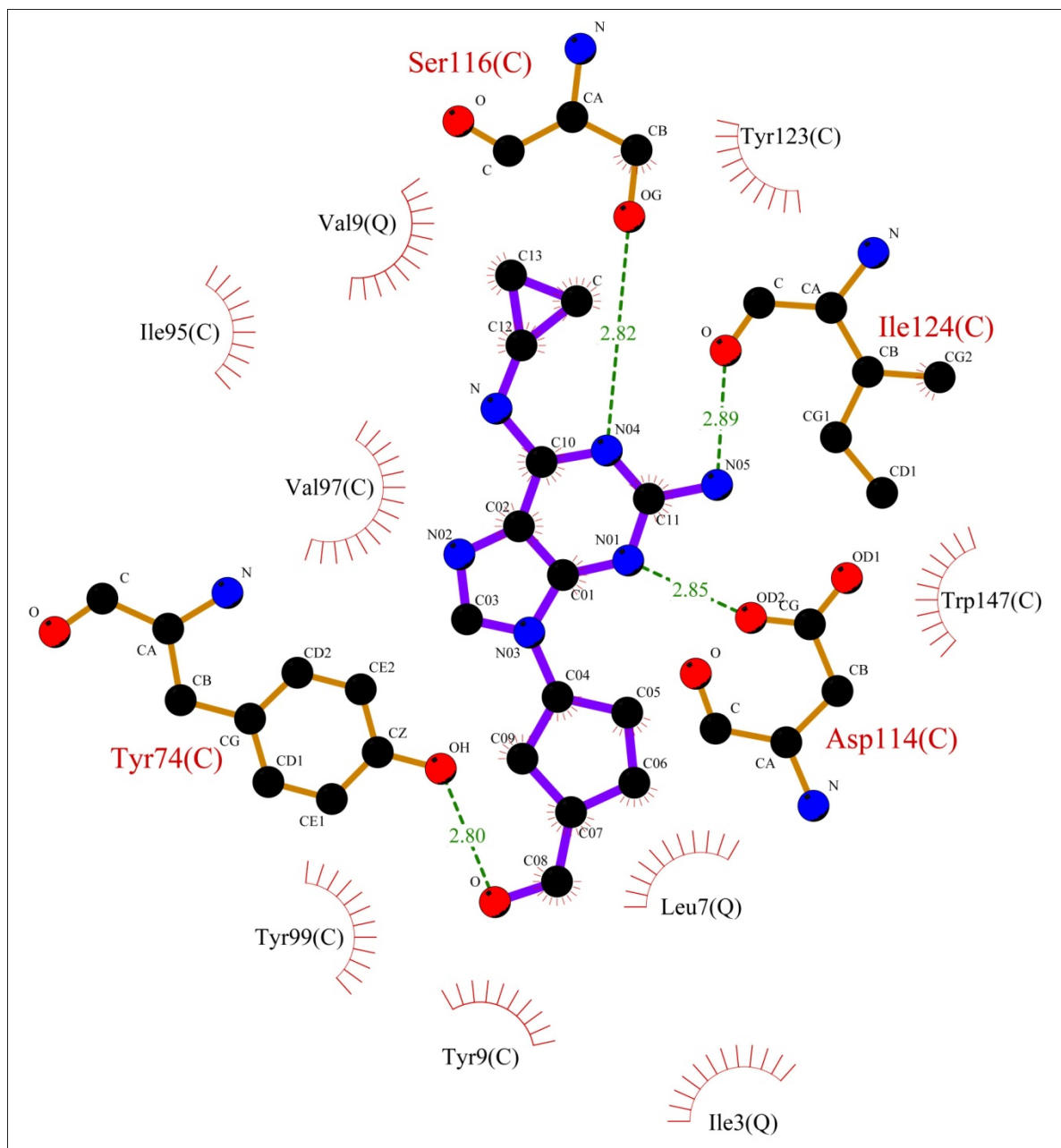


Figure S3: Intermolecular contacts between abacavir, peptide and HLA-B*57:01.

Interactions of abacavir, shown in purple, with the surrounding MHC (C chain) and peptide (Q chain) residues based on PDB 3UPR. H bonds are shown as dashed lines and van der Waals contacts are shown as rays. Interactions were calculated with HBplus and Ligplot.

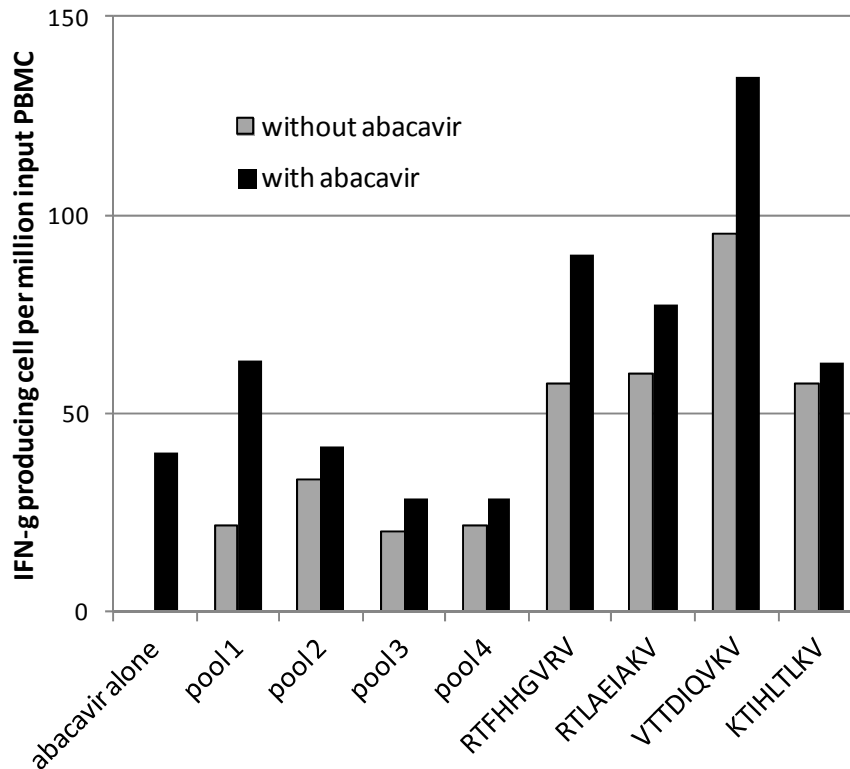


Figure S4: T cells from hypersensitive donors respond to specific self-peptides in an abacavir dependent fashion.

As described in Figure 4, PBMCs from a HLA-B*57:01 positive donors with a clinical history of abacavir hypersensitivity were pulsed for 15 minutes with peptide antigens in the presence or absence of abacavir, or with abacavir alone, washed and then tested by IFN- γ ELISpot assay. Responses from one of two donors are shown for whom there was a sufficient amount of PBMCs available to test all four pools of peptides, and also test individual peptides from pool 1 which gave the highest response of all pools. These data were used to select peptide VTDDIQVKV as an individual peptide in all donors (Figure 4).

Supporting Information References

1. Harndahl M, *et al.* (2009) Peptide binding to HLA class I molecules: homogenous, high-throughput screening, and affinity assays. *J Biomol Screen* 14(2):173-180.
2. Harndahl M, Rasmussen M, Roder G, & Buus S (Real-time, high-throughput measurements of peptide-MHC-I dissociation using a scintillation proximity assay. *J Immunol Methods* 374(1-2):5-12.

Table S1 - Combinatorial library scan for HLA-B*57:01

	Affinity without abcavir [IC50 nM]								
	1	2	3	4	5	6	7	8	9
A	11,000	2,760	982	5,830	4,470	1,030	361	979	11,500
C	15,400	5,220	2,660	2,960	4,770	769	1,190	1,180	18,000
D	15,700	1,020	9,200	3,130	5,980	1,100	2,620	5,540	*
E	*	11,300	7,840	1,370	2,920	489	833	2,010	*
F	*	7,130	1,300	1,390	889	300	314	1,270	287
G	17,700	2,580	2,420	2,270	4,000	1,200	948	1,460	11,800
H	3,620	10,600	4,370	6,040	5,660	187	374	921	15,500
I	4,610	3,280	762	1,350	3,120	814	295	1,130	472
K	3,610	6,640	2,390	2,480	3,420	2,390	1,460	307	13,900
L	9,320	1,820	821	2,420	2,010	525	616	739	911
M	6,730	1,030	685	745	5,050	627	754	1,300	1,190
N	11,400	11,300	4,200	832	8,310	608	1,020	585	15,200
P	*	7,040	10,400	615	3,190	591	842	210	*
Q	14,500	15,200	2,530	361	11,300	677	345	1,250	*
R	6,470	7,270	1,400	2,080	16,300	1,270	563	483	*
S	8,130	147	324	1,230	1,010	1,200	790	673	*
T	13,400	331	1,050	1,160	860	917	1,590	1,620	*
V	*	469	859	1,020	539	582	349	1,610	7,470
W	*	6,540	766	1,060	691	436	409	1,000	176
Y	13,800	4,210	2,370	1,950	925	643	475	668	11,800

*) >20,000 nM

	Affinity with 1mg/ml abcavir [IC50 nM]								
	1	2	3	4	5	6	7	8	9
A	12,200	2,450	541	1,560	1,030	541	362	678	1,720
C	16,300	4,360	4,240	2,210	1,740	547	703	981	17,600
D	15,800	1,560	3,800	2,520	2,420	562	1,340	1,790	*
E	14,700	6,680	6,810	1,560	1,900	420	851	934	17,800
F	15,400	3,470	372	1,530	715	281	156	590	1,370
G	12,000	3,210	1,990	4,620	2,040	619	939	709	13,700
H	3,140	5,090	2,300	1,560	3,250	317	744	894	*
I	7,700	960	274	4,290	1,970	229	142	725	86
K	6,760	5,660	2,840	1,540	8,140	1,210	1,910	722	10,400
L	10,400	1,700	666	2,110	1,140	172	104	624	549
M	9,180	1,170	454	1,220	1,470	227	367	842	740
N	12,900	6,630	2,740	1,240	7,250	271	861	632	17,300
P	19,500	5,890	3,210	1,370	5,540	403	451	142	*
Q	10,700	3,400	2,790	1,030	10,100	201	545	955	*
R	4,020	7,510	1,930	1,280	8,560	377	963	797	*
S	8,980	206	478	1,020	565	642	994	209	14,500
T	9,970	369	452	817	601	564	849	1,420	17,600
V	14,100	1,130	684	1,760	445	395	164	710	851
W	13,900	11,200	612	697	228	401	160	1,060	475
Y	7,590	8,330	1,070	926	402	554	372	432	16,000

*) >20,000 nM

Affinity improvement with abacavir [fold change]									
	1	2	3	4	5	6	7	8	9
A	-	1.1	1.8	3.7	4.3	1.9	-	1.4	6.7
C	-	1.2	-	1.3	2.7	1.4	1.7	1.2	1.0
D	-	-	2.4	1.2	2.5	1.9	2.0	3.1	-
E	>1.4	1.7	1.2	-	1.5	1.2	-	2.1	>1.1
F	>1.3	2.1	3.5	-	1.2	1.1	2.0	2.2	-
G	1.5	-	1.2	-	2.0	1.9	1.0	2.1	-
H	1.2	2.1	1.9	3.9	1.7	-	-	1.0	-
I	-	3.4	2.8	-	1.6	3.5	2.1	1.6	5.5
K	-	1.2	-	1.6	-	2.0	-	-	1.3
L	-	1.1	1.2	1.1	1.8	3.0	5.9	1.2	1.7
M	-	-	1.5	-	3.4	2.8	2.1	1.5	1.6
N	-	1.7	1.5	-	1.1	2.2	1.2	-	-
P	>1	1.2	3.3	-	-	1.5	1.9	1.5	-
Q	1.4	4.5	-	-	1.1	3.4	-	1.3	-
R	1.6	-	-	1.6	1.9	3.4	-	-	-
S	-	-	-	1.2	1.8	1.9	-	3.2	>1.4
T	1.3	-	2.3	1.4	1.4	1.6	1.9	1.1	>1.1
V	>1.4	-	1.3	-	1.2	1.5	2.1	2.3	8.8
W	>1.4	-	1.3	1.5	3.0	1.1	2.6	-	-
Y	1.8	-	2.2	2.1	2.3	1.2	1.3	1.5	-

Table S2 - Combinatorial library scan for HLA-B*58:01

Affinity without abcavir [IC50 nM]									
	1	2	3	4	5	6	7	8	9
A	*	748	1,290	5,260	2,920	1,320	956	1,420	17,500
C	*	2,060	6,640	4,270	6,670	1,100	1,830	3,160	*
D	*	3,320	3,050	3,360	1,450	849	2,860	6,370	*
E	*	6,340	7,540	3,900	5,500	1,890	1,150	5,790	*
F	*	1,800	1,250	2,020	2,280	696	405	1,540	601
G	*	2,960	1,650	8,000	1,160	1,650	1,970	1,410	*
H	11,300	9,920	7,180	8,140	3,310	1,380	1,090	1,050	*
I	17,600	3,910	1,300	6,710	4,500	755	670	1,200	590
K	9,710	2,450	11,800	4,030	12,900	4,260	5,980	831	*
L	19,000	1,200	1,440	2,100	6,530	984	1,070	865	2,430
M	16,400	807	1,150	1,560	3,210	760	1,120	1,260	1,280
N	*	5,510	1,580	2,710	1,280	967	1,170	769	13,300
P	*	2,690	13,100	1,010	4,990	952	1,240	235	*
Q	*	1,460	2,990	1,880	12,200	729	675	2,770	*
R	7,410	7,790	8,240	3,910	10,000	1,560	2,030	1,340	*
S	16,300	409	751	2,540	1,530	1,020	1,250	580	*
T	*	1,190	1,120	1,450	1,280	1,170	2,070	5,200	*
V	*	1,480	747	1,100	1,590	916	623	2,040	12,800
W	*	6,780	1,030	1,790	717	1,240	525	1,790	387
Y	*	7,520	4,560	2,460	426	1,430	938	648	11,900

*) >20,000 nM

Affinity with 1mg/ml abacavir [IC50 nM]									
	1	2	3	4	5	6	7	8	9
A	*	1,350	1,770	9,800	2,850	1,270	1,830	1,420	16,800
C	*	17,300	12,300	6,820	5,140	1,900	2,560	2,980	13,200
D	17,500	16,300	5,360	7,090	7,410	1,390	6,300	9,880	*
E	19,000	9,980	7,290	6,770	2,030	977	1,270	3,610	*
F	*	9,620	1,470	3,110	5,020	811	418	2,340	536
G	*	6,880	2,730	5,080	6,620	5,900	4,310	1,800	17,200
H	12,400	14,300	15,300	10,800	13,400	1,490	1,290	4,790	*
I	10,200	6,300	1,870	4,710	14,500	1,640	930	1,000	2,120
K	16,100	15,700	14,300	9,120	4,470	9,420	5,870	1,810	*
L	13,400	8,930	2,340	4,360	7,810	793	687	867	2,720
M	5,600	1,880	1,400	3,130	7,950	1,100	1,200	2,470	976
N	*	10,400	3,000	1,360	5,790	986	966	1,240	19,700
P	*	7,150	8,760	1,650	6,290	1,660	1,130	467	*
Q	*	7,100	6,080	2,140	11,800	835	1,210	3,680	*
R	12,400	4,240	10,900	6,510	15,000	3,030	3,330	2,770	*
S	13,500	421	1,190	1,620	1,540	1,190	1,690	1,140	*
T	19,200	1,750	1,310	1,550	1,340	1,180	3,880	6,920	*
V	*	2,380	1,630	2,610	2,190	725	1,120	4,120	*
W	*	10,700	1,450	2,300	1,000	1,120	754	3,960	594
Y	19,900	11,500	4,680	1,720	1,490	1,670	426	1,530	8,580

*) >20,000 nM

Affinity improvement with abacavir [fold change]									
	1	2	3	4	5	6	7	8	9
A	-	-	-	-	1.0	1.0	-	-	1.0
C	-	-	-	-	1.3	-	-	1.1	>1.5
D	>1.1	-	-	-	-	-	-	-	-
E	>1.1	-	1.0	-	2.7	1.9	-	1.6	-
F	-	-	-	-	-	-	-	-	1.1
G	-	-	-	1.6	-	-	-	-	>1.2
H	-	-	-	-	-	-	-	-	-
I	1.7	-	-	1.4	-	-	-	1.2	-
K	-	-	-	-	2.9	-	1.0	-	-
L	1.4	-	-	-	-	1.2	1.6	-	-
M	2.9	-	-	-	-	-	-	-	1.3
N	-	-	-	2.0	-	-	1.2	-	-
P	-	-	1.5	-	-	-	1.1	-	-
Q	-	-	-	-	1.0	-	-	-	-
R	-	1.8	-	-	-	-	-	-	-
S	1.2	-	-	1.6	-	-	-	-	-
T	>1	-	-	-	-	-	-	-	-
V	-	-	-	-	-	1.3	-	-	-
W	-	-	-	-	-	1.1	-	-	-
Y	>1	-	-	1.4	-	-	2.2	-	1.4

Table S3: C-terminal combinatorial library scan of HLA B*57:01 and HLA B*57:03 in the dissociation assay.

Peptide	HLA B*57:01			HLA B*57:03		
	-abacavir	+abacavir	Diff^2	-abacavir	+abacavir	Diff^2
X8A	0.0	1.0	0.8	0.2	0.2	0.0
X8C	0.3	0.7	0.1	1.0	1.0	0.0
X8D	0.1	0.0	0.0	0.1	0.1	0.0
X8E	0.2	0.0	0.0	0.1	0.1	0.0
X8F	4.2	1.8	5.8	4.4	4.2	0.0
X8G	0.2	0.4	0.1	0.1	0.1	0.0
X8H	0.5	0.0	0.2	0.3	0.2	0.0
X8I	1.5	4.2	7.2	2.2	2.1	0.0
X8K	0.1	0.0	0.0	0.1	0.1	0.0
X8L	0.7	1.6	0.9	1.8	1.7	0.0
X8M	1.2	2.2	1.0	2.1	2.0	0.0
X8N	0.0	0.1	0.0	0.1	0.0	0.0
X8P	0.0	0.4	0.2	0.2	0.2	0.0
X8Q	0.0	0.1	0.0	0.1	0.1	0.0
X8R	0.1	0.1	0.0	0.1	0.1	0.0
X8S	0.4	0.3	0.0	0.1	0.1	0.0
X8T	0.2	0.5	0.1	0.1	0.1	0.0
X8V	0.3	2.0	2.8	0.9	1.0	0.0
X8W	7.7	3.3	18.8	4.8	4.9	0.0
X8Y	2.2	1.1	1.4	1.3	1.6	0.1

Dissociation curves were generated as explained in Supplemental Figure 3. The reported values are area under the dissociation curve (AUC) divided by the AUC value of the completely randomized library and normalized to an average value of 1 per column

Table S4: X-ray data collection and statistics

Field	Value
Protein	HLA B*57:01•β-microglobulin•pep-V•abacavir
PDB Accession Code	3UPR
Space Group	P 1 2 ₁ 1
Unit Cell Dimensions	
a, b, c (Å)	44.75, 131.41, 88.34
α,β,γ (°)	90, 104.30, 90
Resolution (Å)	30.00 – 2.00
Number of unique Reflections	64,702 (2605)
Completeness (%)	96.85 (73.00)
Redundancy	4.30 (2.70)
R_{merge}¹	0.090 (0.48)
I/σ(I)	22.84(2.2)
R_{work}², R_{free}³	0.18, 0.22
Ramachandran Statistics⁴ (%)	
Most Favored	96.82
Allowed	3.18
Outliers	0
Number of atoms	
Protein, solvent	6287, 431
Abacavir	42
Average B factors (Å²)	
Protein (heavy chain, light chain)	35.45, 33.00
Waters	33.48
Pep-V	27.51
Abacavir	21.61

Values in parentheses are for highest resolution bin.

$$^1R_{\text{merge}} = \frac{\sum |I - \langle I \rangle|}{\sum \langle I \rangle}$$

$$^2R_{\text{work}} = \frac{\sum |F_o(hkl) - |F_c(hkl)||}{\sum |F_o(hkl)|}$$

³R_{free} is calculated in the same manner based on 10% of the reflection data not used during refinement.

⁴Statistics generated using MOLPROBITY (Chen et al. (2010) *Acta Cryst D* 66:12-21).

Table S5: List of peptides eluted in the presence and absence of abacavir.

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
both	KTKRISIQF	F	8	P68366	Tubulin alpha-4A chain	336	343
both	RTRIGYSF	F	8	Q9NYH9	U3 small nucleolar RNA-associated protein 6 homolog	72	79
both	GTHKVTVLF	F	9	P21333	Filamin-A	352	360
both	HTQKNRQFF	F	9	O95766	UPF0550 protein C7orf28	85	93
both	ISKKINTKF	F	9	O00232	26S proteasome non-ATPase regulatory subunit 12	205	213
both	ISNKKEAKF	F	9	Q9UBU7	Protein DBF4 homolog A	87	95
both	ISTPVIRTF	F	9	Q9NZB2	Constitutive coactivator of PPAR-gamma-like protein 1	989	997
both	ITNKYQLVF	F	9	Q9NYV6	RNA polymerase I-specific transcription initiation factor RRN3	516	524
both	KAKKEIEKF	F	9	Q9UHW5	GPN-loop GTPase 3	182	190
both	KARQKTNVF	F	9	Q9ULX3	RNA-binding protein NOB1	354	362
both	KSKLSQNNF	F	9	Q9Y277	Voltage-dependent anion-selective channel protein 3	161	169
both	KSKLTRNNF	F	9	P45880	Voltage-dependent anion-selective channel protein 2	172	180
both	KSLGVTTKF	F	9	Q5VWZ2	Lysophospholipase-like protein 1	195	203
both	KSRELNTRF	F	9	Q8IXQ4	Uncharacterized protein KIAA1704	323	331
both	KSRGVLHQF	F	9	P27144	Adenylate kinase isoenzyme 4, mitochondrial	186	194
both	KSRVTQSNF	F	9	P21796	Voltage-dependent anion-selective channel protein 1	161	169
both	KSSDIAKTF	F	9	P13797	Plastin-3	82	90
both	KSSQVQRRF	F	9	P13010	ATP-dependent DNA helicase 2 subunit 2	347	355
both	KSSRKTYTF	F	9	P52732	Kinesin-like protein KIF11	60	68
both	KSTDVAKTF	F	9	P13796	Plastin-2	82	90
both	KTAPFDSRF	F	9	P14854	Cytochrome c oxidase subunit VIb isoform 1	13	21
both	KTKNAVEKF	F	9	Q7Z7A1	Centriolin	1455	1463
both	KTKQGGLRF	F	9	Q965Z6	CDK5 regulatory subunit-associated protein 1	346	354
both	KTKRDINRF	F	9	Q9HAS0	Protein Njmu-R1	238	246
both	KTRTNVPTF	F	9	Q96BU1	S100P-binding protein	305	313
both	KTSGIINKF	F	9	O95243	Methyl-CpG-binding domain protein 4	328	336
both	LSSPVTKSF	F	9	P01834	Ig kappa chain C region	93	101
both	RAKPEYHKF	F	9	Q00341	Vigilin	733	741
both	RARTIYERF	F	9	Q9BZJ0	Crooked neck-like protein 1	361	369
both	RSLRLKQKF	F	9	Q12788	WD repeat-containing protein SAZD	208	216
both	RSSGVRSSF	F	9	Q14667	UPF0378 protein KIAA0100	2083	2091
both	RTHPVATSF	F	9	Q96B26	Exosome complex exonuclease RRP43	190	198
both	RTKENAEKF	F	9	Q14894	Mu-crystallin homolog	169	177
both	RTKRSSVVF	F	9	Q92608	Dedicator of cytokinesis protein 2	1701	1709
both	RTQIRHMKF	F	9	O95503	Chromobox protein homolog 6	221	229
both	RTRKGILLF	F	9	Q04941	Proteolipid protein 2	21	29
both	RTSIVEKRF	F	9	Q9BXR0	Queuine tRNA-ribosyltransferase	345	353
both	RTVEKPPKF	F	9	O15020	Spectrin beta chain, brain 2	351	359
both	TTLHQKTF	F	9	Q13347	Eukaryotic translation initiation factor 3 subunit 1	218	226
both	VSKAPAPTF	F	9	A6NCL7	Ankyrin repeat domain-containing protein LOC651746	428	436
both	VSKPSAPVF	F	9	Q69YN4	Protein virilizer homolog	76	84
both	VSKRLHQRF	F	9	Q96ST3	Paired amphipathic helix protein Sin3a	1202	1210
both	VTHSVRIGF	F	9	P26010	Integrin beta-7	185	193
both	YTYRGPKAF	F	9	Q12874	Splicing factor 3A subunit 3	414	422
both	KAHPPPELKKF	F	10	P62308	Small nuclear ribonucleoprotein G	3	12
both	KARREAKVKF	F	10	P61353	60S ribosomal protein L27	109	118
both	KSRGYVKEQF	F	10	P46783	40S ribosomal protein S10	53	62
both	KTKDGVREVF	F	10	P61586	Transforming protein RhoA	162	171
both	KTKEGVREVF	F	10	P08134	Rho-related GTP-binding protein RhoC	162	171
both	KTKNAQQVHF	F	10	Q66K89	Transcription factor E4F1	529	538
both	KTLDQAIMKF	F	10	Q92878	DNA repair protein RAD50	1126	1135
both	KTLDHTRTHF	F	10	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	1862	1871
both	KTNEHGMKTF	F	10	Q562F6	Shugoshin-like 2	389	398
both	KTRRPDNTAF	F	10	Q9NV96	Cell cycle control protein 50A	24	33
both	KTVEPTGKRF	F	10	P10155	60 kDa SS-A/Ro ribonucleoprotein	362	371
both	LSKQETGTEF	F	10	Q15051	IQ calmodulin-binding motif-containing protein 1	261	270
both	LSRPDGSASF	F	10	Q9NQT4	Exosome complex exonuclease RRP46	38	47
both	STAKEIIQHF	F	10	Q9UET6	Putative ribosomal RNA methyltransferase 1	96	105
both	VTKTVSNDSF	F	10	P55209	Nucleosome assembly protein 1-like 1	288	297
both	ITSSIHSKETF	F	11	Q07864	DNA polymerase epsilon catalytic subunit A	1890	1900
both	KSKEDLVSQGF	F	11	Q96FW1	Ubiquitin thioesterase OTUB1	120	130
both	KSKPVEKNYAF	F	11	P09884	DNA polymerase alpha catalytic subunit	431	441

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
both	KTKSTETEHSF	F	11	Q9UHC1	DNA mismatch repair protein Mlh3	617	627
both	KTLVNPANVTF	F	11	O75608	Acyl-protein thioesterase 1	190	200
both	KTMSAKEKGKF	F	11	B2RPK0	Putative high mobility group protein 1-like 1	50	60
both	KTMSAKEKSKF	F	11	P26583	60S ribosomal protein L29	50	60
both	RTISTASRRHF	F	11	P14406	Cytochrome c oxidase polypeptide 7A2, mitochondrial	14	24
both	RTNPNSGDFRF	F	11	Q9NVW2	E3 ubiquitin-protein ligase RNF12	127	137
both	HSIQYSGEVRFF	F	12	P04040	Catalase	421	432
both	KARELDPRI	I	9	Q9ULW0	Targeting protein for Xklp2	403	411
both	KSAIPHPLI	I	9	P61201	COP9 signalosome complex subunit 2	225	233
both	KSKNILFVI	I	9	O15069	NAC-alpha domain-containing protein 1	1439	1447
both	KSKPDKQLI	I	9	Q03933	Heat shock factor protein 2	435	443
both	KSRDYEREI	I	9	Q9NRZ9	Lymphoid-specific helicase	776	784
both	KSVLVKQTI	I	9	Q9UHX1	Poly	80	88
both	KTAVVVGTI	I	9	Q07020	60S ribosomal protein L18	78	86
both	KTKGFHTTI	I	9	Q15417	Calponin-3	130	138
both	KTKKSLESI	I	9	P62888	60S ribosomal protein L30	6	14
both	KTKPIHTII	I	9	Q8IWI9	MAX gene-associated protein	1032	1040
both	KVRTEKETI	I	9	P12270	Nucleoprotein TPR	1405	1413
both	LSKRNPQRQI	I	9	P83731	60S ribosomal protein L24	41	49
both	KARLPLRL	L	8	O00767	Acyl-CoA desaturase	129	136
both	AAPEGKRSL	L	9	Q9Y6B2	EP300-interacting inhibitor of differentiation 1	67	75
both	HTWNGIRHL	L	9	Q99643	Succinate dehydrogenase cytochrome b560 subunit, mitochondrial	127	135
both	ISKQFHHQL	L	9	Q99613	Eukaryotic translation initiation factor 3 subunit C	710	718
both	KTFRIKRFL	L	9	P62891	60S ribosomal protein L39	5	13
both	KTIKLWNTL	L	9	P63244	Guanine nucleotide-binding protein subunit beta-2-like 1	127	135
both	KTRMEERRL	L	9	Q9BY42	UPF0549 protein C20orf43	183	191
both	RAREYNARL	L	9	Q00653	Nuclear factor NF-kappa-B p100 subunit	442	450
both	RSNRVVRTL	L	9	Q9Y5Y5	Peroxisomal membrane protein PEX16	170	178
both	RTKASVHTL	L	9	O43660	Pleiotropic regulator 1	318	326
both	TTSRVLKVL	L	9	P35222	Catenin beta-1	339	347
both	KTWAGSQSRRRL	L	11	Q9UI43	Putative ribosomal RNA methyltransferase 2	194	204
both	RTMSSSDRAMM	M	11	Q00403	Transcription initiation factor IIB	105	115
both	KTKDVTVW	W	8	Q96DR4	StAR-related lipid transfer protein 4	34	41
both	LSKKSQKW	W	8	P41236	Protein phosphatase inhibitor 2	40	47
both	MAARGHSW	W	8	Q14213	Interleukin-27 subunit beta	70	77
both	VSKVSTTW	W	8	Q9UKT4	F-box only protein 5	274	281
both	VTRKSWLW	W	8	P82930	28S ribosomal protein S34, mitochondrial	80	87
both	VTRQGALW	W	8	Q55RD1	Putative mitochondrial import inner membrane translocase subunit	120	127
both	AAQITQRKW	W	9	P30504	HLA class I histocompatibility antigen, Cw-4 alpha chain	163	171
both	ASHKGQKLW	W	9	O15049	NEDD4-binding protein 3	135	143
both	ETKKKVFLW	W	9	A6NDK8	Protein FAM35B	480	488
both	FVKKLEHSW	W	9	Q99755	Phosphatidylinositol-4-phosphate 5-kinase type-1 alpha	358	366
both	GSKDKNFQW	W	9	P49792	E3 SUMO-protein ligase RanBP2	2864	2872
both	GTDKTLRTW	W	9	Q9NWT1	p21-activated protein kinase-interacting protein 1	142	150
both	GTLKGHNGW	W	9	P63244	Guanine nucleotide-binding protein subunit beta-2-like 1	9	17
both	GTLSGHASW	W	9	Q9GZS3	WD repeat-containing protein 61	226	234
both	GTVLKTSSW	W	9	Q460N5	Poly [ADP-ribose] polymerase 14	993	1001
both	GTYGVRAAW	W	9	P13598	Intercellular adhesion molecule 2	258	266
both	HSHPHITVW	W	9	P46736	BRCA1/BRCA2-containing complex subunit 3	122	130
both	IAAPDSRRW	W	9	O95297	Myelin protein zero-like protein 1	11	19
both	IAAQGTTRW	W	9	Q9BZL1	Ubiquitin-like protein 5	31	39
both	ISKEEAMRW	W	9	P62913	60S ribosomal protein L11	157	165
both	ISSSAGARW	W	9	Q92673	Sortilin-related receptor	522	530
both	ITAGAHRLW	W	9	O00767	Acyl-CoA desaturase	115	123
both	ITKKQVSVW	W	9	P13196	5-aminolevulinate synthase, nonspecific, mitochondrial	240	248
both	ITTKAISRW	W	9	P49368	T-complex protein 1 subunit gamma	160	168
both	ITYDKLNKW	W	9	P05120	Plasminogen activator inhibitor 2	286	294
both	ITYQHIDRW	W	9	Q9UBQ5	Eukaryotic translation initiation factor 3 subunit K	148	156
both	KAAPRSQHW	W	9	Q92917	G patch domain and KOW motifs-containing protein	349	357
both	KAKREVSSW	W	9	P53582	Methionine aminopeptidase 1	59	67
both	KATPIKLIW	W	9	P49685	G-protein coupled receptor 15	187	195
both	KGKPIRIMW	W	9	Q13310	Polyadenylate-binding protein 4	78	86
both	KGKPVIRIMW	W	9	P11940	Polyadenylate-binding protein 1	78	86

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
both	KLKDIRNAW	W	9	Q9UKD2	mRNA turnover protein 4 homolog	52	60
both	KSFENISKW	W	9	P61026	Ras-related protein Rab-10	95	103
both	KSGSVQEQQW	W	9	Q9NXF1	Testis-expressed sequence 10 protein	895	903
both	KSIRNDIEW	W	9	Q9NPA3	Mid1-interacting protein 1	95	103
both	KSKPKNSVW	W	9	Q92963	GTP-binding protein Rit1	196	204
both	KSSLTQHSW	W	9	Q9NYB0	Telomeric repeat-binding factor 2-interacting protein 1	169	177
both	KTHPLWRLW	W	9	Q9HBE5	Interleukin-21 receptor	256	264
both	KTKETSVNW	W	9	P55265	Double-stranded RNA-specific adenosine deaminase	1120	1128
both	KTKEVIQEW	W	9	Q9Y490	Talin-1	343	351
both	KTKEVLQEW	W	9	Q9Y4G6	Talin-2	346	354
both	KVKEQKDYW	W	9	Q13137	Calcium-binding and coiled-coil domain-containing protein 2	197	205
both	LA AVRGEQW	W	9	P13498	Cytochrome b-245 light chain	123	131
both	LATTILQHW	W	9	P78527	DNA-dependent protein kinase catalytic subunit	1618	1626
both	LSGPFVQKW	W	9	P22102	Trifunctional purine biosynthetic protein adenosine-3	899	907
both	LSQEQLRQW	W	9	P32248	C-C chemokine receptor type 7	347	355
both	LTYENVERW	W	9	Q15907	Ras-related protein Rab-11B	97	105
both	LVRNSHHTW	W	9	Q9NXG6	Putative HIF-prolyl hydroxylase PH-4	271	279
both	RADKRVNEW	W	9	Q15393	Splicing factor 3B subunit 3	528	536
both	RAKNVRNDW	W	9	Q6RFH5	WD repeat-containing protein 74	169	177
both	RGKAHAAVW	W	9	O00170	AH receptor-interacting protein	271	279
both	RSKEESAHW	W	9	Q9BY42	UPF0549 protein C20orf43	290	298
both	RSRSPHRKW	W	9	Q9NYV4	Cell division cycle 2-related protein kinase 7	219	227
both	RSRSPRERHW	W	9	Q16560	U11/U12 small nuclear ribonucleoprotein 35 kDa protein	186	194
both	RTVIIQSW	W	9	P10809	60 kDa heat shock protein, mitochondrial	60	68
both	RVAQMKRTW	W	9	Q8IY37	Probable ATP-dependent RNA helicase DHX37	835	843
both	RVHPETYEW	W	9	Q7KZ85	Transcription elongation factor SPT6	1057	1065
both	SADKTVKWLW	W	9	Q9Y263	Phospholipase A-2-activating protein	170	178
both	SADRTVKWLW	W	9	P57737	Coronin-7	97	105
both	SSEKHAYSW	W	9	Q8WUM0	Nuclear pore complex protein Nup133	302	310
both	SSLKKKQIW	W	9	Q16658	Fascin	38	46
both	SSSKEHVKW	W	9	P46063	ATP-dependent DNA helicase Q1	164	172
both	SSSRIRAAW	W	9	P14543	Nidogen-1	4	12
both	STKRKAADVW	W	9	P21359	Neurofibromin	259	267
both	SVKRNQAVW	W	9	Q6ZNB6	NF-X1-type zinc finger protein NFXL1	166	174
both	SVTEIQEKW	W	9	Q9NR30	Nucleolar RNA helicase 2	689	697
both	TAKISDFSW	W	9	Q16576	Histone-binding protein RBBP7	373	381
both	TSKITSTAW	W	9	Q9UKA1	F-box/LRR-repeat protein 5	423	431
both	TTFSNSQRW	W	9	O14966	Ras-related protein Rab-7L1	94	102
both	TTSKPVRKW	W	9	Q8IWZ6	Bardet-Biedl syndrome 7 protein	222	230
both	VAHTIKQAW	W	9	Q95460	Major histocompatibility complex class I-related gene protein	157	165
both	VARKSEHW	W	9	Q8TAT5	Endonuclease VIII-like 3	313	321
both	VSKTLPSTW	W	9	Q14677	Clathrin interactor 1	469	477
both	VTALAARTW	W	9	Q9UII2	ATPase inhibitor, mitochondrial	3	11
both	VTKKTYEIW	W	9	Q14839	Chromodomain-helicase-DNA-binding protein 4	1721	1729
both	VTNKSVSVW	W	9	Q9H974	Queuine tRNA-ribosyltransferase domain-containing protein 1	108	116
both	VTNPHSSQW	W	9	P24522	Growth arrest and DNA-damage-inducible protein GADD45 alpha	127	135
both	VTYKNVPNW	W	9	P62826	GTP-binding nuclear protein Ran	96	104
both	YTDNLVRVW	W	9	P63244	Guanine nucleotide-binding protein subunit beta-2-like 1	302	310
both	ASDDQTIRVW	W	10	P53621	Coatamer subunit alpha	111	120
both	ASKGREAMEW	W	10	Q9Y3B1	Protein slowmo homolog 2	153	162
both	ATRKHGTDLW	W	10	Q9NP61	ADP-ribosylation factor GTPase-activating protein 3	124	133
both	AVTALAARTW	W	10	Q9UII2	ATPase inhibitor, mitochondrial	2	11
both	ETKGDHPYTW	W	10	Q9Y570	Protein phosphatase methylesterase 1	278	287
both	GTDNRNRYW	W	10	Q9UIG0	Bromodomain adjacent to zinc finger domain protein 1B	904	913
both	HGKPVTVQW	W	10	Q14137	Ribosome biogenesis protein BOP1	533	542
both	HSAAHTKLQW	W	10	Q96MD2	UPF0536 protein C12orf66	217	226
both	HSITSDNHKW	W	10	Q8NEM7	Protein FAM48A	178	187
both	HTAPPENKTW	W	10	Q6N021	Protein TET2	994	1003
both	HTLDDRTQLW	W	10	Q9BXP5	Arsenite-resistance protein 2	529	538
both	IAANEENRW	W	10	O75368	SH3 domain-binding glutamic acid-rich-like protein	39	48
both	ITAENVAKKW	W	10	Q9BWD1	Acetyl-CoA acetyltransferase, cytosolic	162	171
both	ITKADAAEFW	W	10	Q13191	E3 ubiquitin-protein ligase CBL-B	173	182
both	ITKEIANEW	W	10	O75410	Transforming acidic coiled-coil-containing protein 1	615	624

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
both	ITSQDVLHSW	W	10	P00403	Cytochrome c oxidase subunit 2	154	163
both	KAHQVKNHMW	W	10	P11388	DNA topoisomerase 2-alpha	352	361
both	KANEGKKEW	W	10	Q96K76	Ubiquitin carboxyl-terminal hydrolase 47	997	1006
both	KAREYSKEGW	W	10	Q5XKP0	Protein QIL1	101	110
both	KARVETQNHW	W	10	P28066	Proteasome subunit alpha type-5	91	100
both	KAVIDLNNRW	W	10	Q01081	Splicing factor U2AF 35 kDa subunit	125	134
both	KGFSEEHNTW	W	10	P45973	Chromobox protein homolog 5	42	51
both	KSAEKEISLW	W	10	P22392	Nucleoside diphosphate kinase B	124	133
both	KSGPVVSLGW	W	10	Q9H269	Vacuolar protein sorting-associated protein 16 homolog	82	91
both	KSKGSQTEEW	W	10	Q14202	Zinc finger MYM-type protein 3	851	860
both	KSSIHDARSW	W	10	Q8N2I9	Serine/threonine-protein kinase 40	389	398
both	KTEASETRKW	W	10	Q1ED39	Protein C16orf88	345	354
both	KTNIQKEATW	W	10	A8MYJ9	Importin subunit alpha-2-like protein	109	118
both	KTQTPNRKEW	W	10	P09874	Poly [ADP-ribose] polymerase 1	324	333
both	KVAKEAANRW	W	10	Q9BWT6	Meiotic nuclear division protein 1 homolog	160	169
both	MTAGVDGHSW	W	10	O75694	Nuclear pore complex protein Nup155	450	459
both	RAKTDSAEKW	W	10	Q15058	Kinesin-like protein KIF14	124	133
both	RALELEARRW	W	10	Q03169	Tumor necrosis factor, alpha-induced protein 2	334	343
both	RATQSGQRRW	W	10	Q5SXM2	snRNA-activating protein complex subunit 4	722	731
both	RQNPHHVHEW	W	10	Q9HCS7	Pre-mRNA-splicing factor SYF1	351	360
both	RSFKETTNRW	W	10	Q92613	Protein Jade-3	714	723
both	RSQKAEGQRW	W	10	O15533	Tapasin	339	348
both	RSRDISREEW	W	10	Q9ULV3	Cip1-interacting zinc finger protein	767	776
both	RSYSESEKQW	W	10	Q96HQ2	CDKN2AIP N-terminal-like protein	28	37
both	RTAGHPLTRW	W	10	P35236	Tyrosine-protein phosphatase non-receptor type 7	76	85
both	RTLVDNNTW	W	10	P46977	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	538	547
both	RTTLVDNNTW	W	10	Q8TCJ2	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	617	626
both	RVKPLHYSW	W	10	O43847	Nardilysin	453	462
both	RVKSVNLDQW	W	10	Q8IYB5	Stromal membrane-associated protein 1	69	78
both	SAASPHYQEW	W	10	Q6SPF0	Atherin	25	34
both	SATDAAIRVW	W	10	Q12788	WD repeat-containing protein SAZD	57	66
both	TAAQITQRKW	W	10	P30480	HLA class I histocompatibility antigen, B-2 alpha chain	162	171
both	TSSKPDPSQW	W	10	O75410	Transforming acidic coiled-coil-containing protein 1	380	389
both	TVYTGIDHHW	W	10	Q9NV06	WD repeat and SOF domain-containing protein 1	157	166
both	VTNKSQLRTW	W	10	P27694	Replication protein A 70 kDa DNA-binding subunit	203	212
both	VTVPANVQRW	W	10	Q13155	Multisynthetase complex auxiliary component p38	293	302
both	AAPFAEKESEW	W	11	Q9BRF8	Uncharacterized metallophosphoesterase CSTP1	19	29
both	ASYSGKAADVW	W	11	Q96RU7	Tribbles homolog 3	235	245
both	GTWIGKTERW	W	11	Q9C0C9	Ubiquitin-conjugating enzyme E2 O	1045	1055
both	GYMGHTGAVW	W	11	Q13347	Eukaryotic translation initiation factor 3 subunit I	46	56
both	HSNEQTLQRSW	W	11	Q9Y6J8	Serine/threonine/tyrosine-interacting-like protein 1	263	273
both	HTNQDHHVAVW	W	11	Q9UNY4	Transcription termination factor 2	526	536
both	KASSEVERQRW	W	11	P22059	Oxysterol-binding protein 1	162	172
both	KIRsPGKNHKW	W	11	Q9UHK0	Nuclear fragile X mental retardation-interacting protein 1	289	299
both	KSKAMTGVQEW	W	11	P49368	T-complex protein 1 subunit gamma	425	435
both	KSKLDAEVSKW	W	11	P35221	Catenin alpha-1	695	705
both	KTVDGPSGKLW	W	11	P04406	Glyceraldehyde-3-phosphate dehydrogenase	186	196
both	KVARDQAVKKW	W	11	O75792	Ribonuclease H2 subunit A	183	193
both	KVIHEQVNHHRW	W	11	P11388	DNA topoisomerase 2-alpha	287	297
both	QTDPSGTYHAW	W	11	Q8TAA3	Proteasome subunit alpha type-7-like	154	164
both	RALEAEKRALW	W	11	Q14160	Protein LAP4	1491	1501
both	RARLEESRRLW	W	11	Q01082	Spectrin beta chain, brain 1	631	641
both	RTIQTPIGSTW	W	11	Q9BVJ6	U3 small nucleolar RNA-associated protein 14 homolog A	697	707
both	RVFEDESGKHW	W	11	Q8TEA8	D-tyrosyl-tRNA	53	63
both	RVRAGPKKESW	W	11	Q96GQ5	UPF0420 protein C16orf58	407	417
both	SASPDATIRIW	W	11	Q9UMS4	Pre-mRNA-processing factor 19	281	291
both	SSATDAAIRVW	W	11	Q12788	WD repeat-containing protein SAZD	56	66
both	TGSTDKTVRLW	W	11	O75529	TAF5-like RNA polymerase II p300/CBP-associated factor	443	453
both	TSRPPAQGASW	W	11	O14976	Cyclin G-associated kinase	1121	1131
both	VAKKTKDVTYW	W	11	Q96DR4	StAR-related lipid transfer protein 4	31	41
both	VGLPAAGKTTW	W	11	Q9BUJ2	Heterogeneous nuclear ribonucleoprotein U-like protein 1	427	437
both	VVSPHEDMRTW	W	11	P42345	FKBP12-rapamycin complex-associated protein	1643	1653
both	RSKDDPGKGSYW	W	12	Q9UPW0	Forkhead box protein J3	141	152

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
both	RTKANEGKKETW	W	12	Q96K76	Ubiquitin carboxyl-terminal hydrolase 47	995	1006
both	RTLDEAVGVQKW	W	12	Q14667	UPF0378 protein KIAA0100	836	847
both	VSDSGAHLNSW	W	12	Q9NVM9	Uncharacterized protein C12orf11	80	91
both	KVKDGGPGGKEATW	W	13	P22307	Non-specific lipid-transfer protein	462	474
both	KARNSFRY	Y	8	P46779	60S ribosomal protein L28	33	40
both	HTRSDVRLY	Y	9	Q86T12	Dipeptidyl peptidase 9	614	622
both	ISKALVAYY	Y	9	P62249	40S ribosomal protein S16	88	96
both	KAAEMRRIY	Y	9	Q9NUP1	Protein cappuccino homolog	124	132
both	KASGTLREY	Y	9	Q02543	60S ribosomal protein L18a	2	10
both	KSFVKVYNY	Y	9	P61353	60S ribosomal protein L27	69	77
both	KSKITHPVY	Y	9	Q9UGP8	Translocation protein SEC63 homolog	631	639
both	KSRRDTPKY	Y	9	Q9Y2X3	Nucleolar protein 5	330	338
both	KTAGKRYVY	Y	9	P14921	Protein C-ets-1	404	412
both	KTFPYQHRY	Y	9	Q8NI27	THO complex subunit 2	398	406
both	KTKEIEQVY	Y	9	Q8NEY8	Periphilin-1	297	305
both	KTKFPAEQY	Y	9	Q15631	Translin	76	84
both	KTNQLHRMY	Y	9	Q9UBI1	COMM domain-containing protein 3	137	145
both	KTRIIDVVY	Y	9	P62241	40S ribosomal protein S8	75	83
both	LAKTGVHHY	Y	9	P62888	60S ribosomal protein L30	66	74
both	LVKREDYLY	Y	9	O95298	NADH dehydrogenase [ubiquinone] 1 subunit C2	74	82
both	MTNPHNHLY	Y	9	Q15006	Tetratricopeptide repeat protein 35	183	191
both	RSQVQRARY	Y	9	P60900	Proteasome subunit alpha type-6	88	96
both	RSRRDELHY	Y	9	Q9Y5W7	Sorting nexin-14	184	192
both	RTIVIRRDY	Y	9	P62280	40S ribosomal protein S11	84	92
both	RVKQEEQRY	Y	9	O75410	Transforming acidic coiled-coil-containing protein 1	722	730
both	RVRDVTYKY	Y	9	Q12931	Heat shock protein 75 kDa, mitochondrial	269	277
both	HTFQNDIHVY	Y	10	Q15392	24-dehydrocholesterol reductase	399	408
both	KIYPGHRRY	Y	10	P83731	60S ribosomal protein L24	12	21
both	KSFSESGINY	Y	10	O60762	Dolichol-phosphate mannosyltransferase	49	58
both	KTAVIDHHNY	Y	10	P39656	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	136	145
both	KTKEVIGTGY	Y	10	Q9BT09	Protein canopy homolog 3	68	77
both	KTLPADVQNY	Y	10	Q99590	SFRS2-interacting protein	837	846
both	KSKPKQLIQY	Y	11	Q03933	Heat shock factor protein 2	435	445
both	KTLPETSLPNY	Y	11	Q9BYI3	Hyccin	17	27
both	RTKKVGIVGKY	Y	11	P61513	Outer dense fiber protein 2	4	14
both	DGSSLPADVHRY	Y	12	Q96KA5	Cleft lip and palate transmembrane protein 1-like protein	186	197
treated	RSVALAVLA	A	9	P61769	Beta-2-microglobulin	3	11
treated	ATHPSRAQF	F	9	O95834	Echinoderm microtubule-associated protein-like 2	384	392
treated	HSNPEPKTF	F	9	Q9NS87	Kinesin-like protein KIF15	62	70
treated	KSKENPRNF	F	9	P37802	Transgelin-2	154	162
treated	KSVKKGFEF	F	9	Q15019	Septin-2	30	38
treated	KSYGNEKRF	F	9	Q06330	Recombining binding protein suppressor of hairless	58	66
treated	KVAEVTKKF	F	9	P35914	Hydroxymethylglutaryl-CoA lyase, mitochondrial	184	192
treated	RSKTVYEGF	F	9	Q9NW38	E3 ubiquitin-protein ligase FANCL	20	28
treated	RSQQNRHSF	F	9	O76039	Cyclin-dependent kinase-like 5	439	447
treated	RSYEEKKQF	F	9	Q6IQ32	ADNP homeobox protein 2	1049	1057
treated	RTATFQQRF	F	9	Q9BY77	Polymerase delta-interacting protein 3	46	54
treated	RTHTGEKKF	F	9	Q13118	Krueppel-like factor 10	421	429
treated	RTHTGEKRF	F	9	Q8TD94	Krueppel-like factor 14	247	255
treated	RTKDILIRF	F	9	Q68CP4	Heparan-alpha-glucosaminide N-acetyltransferase	527	535
treated	RTKQVLHTF	F	9	Q9BTV5	Fibronectin type III and SPRY domain-containing protein 1	439	447
treated	RVAQKKASF	F	9	P46777	60S ribosomal protein L5	279	287
treated	SSRRKQLTF	F	9	Q8WTV1	THAP domain-containing protein 3	15	23
treated	STTDVEKSF	F	9	Q53EL6	Programmed cell death protein 4	232	240
treated	VAKKIHEEF	F	9	Q9Y2L1	Exosome complex exonuclease RRP44	674	682
treated	VSKSVTQGF	F	9	Q92599	Septin-8	35	43
treated	HSGDHGKRLF	F	10	O43674	NADH dehydrogenase] 1 beta subcomplex subunit 5, mitochondrial	46	55
treated	KSSSHERRAF	F	10	P51532	Probable global transcription activator SNF2L4	1237	1246
treated	KTKSENGLEF	F	10	P21796	Voltage-dependent anion-selective channel protein 1	32	41
treated	KTMKMRGQAF	F	10	P08579	U2 small nuclear ribonucleoprotein B''	44	53
treated	KTRSTKDQQF	F	10	O75044	SLIT-ROBO Rho GTPase-activating protein 2	77	86
treated	RSDTSDKRKF	F	10	P20591	Interferon-induced GTP-binding protein Mx1	633	642
treated	RTKQQREAEF	F	10	Q15005	Signal peptidase complex subunit 2	180	189

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
treated	KSRKEQKETT	F	11	P35408	Prostaglandin E2 receptor EP4 subtype	44	54
treated	KSRPEDQRSSF	F	11	Q9UPZ3	Hermansky-Pudlak syndrome 5 protein	899	909
treated	KSRSSRAGLQF	F	11	Q8IU66	Histone H2A type 2-B	16	26
treated	KTRSKGRNEQF	F	11	O75691	Small subunit processome component 20 homolog	484	494
treated	RSRPQKHQNTF	F	11	Q96MD7	Uncharacterized protein C9orf85	10	20
treated	KSYKGRQI	I	8	Q14683	Structural maintenance of chromosomes protein 1A	13	20
treated	RTKKPVVI	I	8	Q9NSE4	Isoleucyl-tRNA synthetase, mitochondrial	468	475
treated	ASVGDRVTI	I	9	P04432	Ig kappa chain V-I region Daudi	35	43
treated	ATIDKVVKI	I	9	Q13535	Serine/threonine-protein kinase ATR	561	569
treated	AVITNQPEI	I	9	P25963	NF-kappa-B inhibitor alpha	118	126
treated	GTHVGKVINI	I	9	Q9GZ53	WD repeat-containing protein 61	124	132
treated	ISIKQEPKI	I	9	Q96CB8	Integrator complex subunit 12	65	73
treated	ITKTVVENI	I	9	P57740	Nuclear pore complex protein Nup107	635	643
treated	KAIHNKVNI	I	9	Q15019	Septin-2	169	177
treated	KAYSEAHEI	I	9	P61981	14-3-3 protein gamma	152	160
treated	KSATKQPSI	I	9	O94782	Ubiquitin carboxyl-terminal hydrolase 1	343	351
treated	KSIKNIQKI	I	9	P36542	ATP synthase subunit gamma, mitochondrial	36	44
treated	KSKSEIKI	I	9	Q96CS2	Coiled-coil domain-containing protein 5	130	138
treated	KTFTTQETI	I	9	P06744	Glucose-6-phosphate isomerase	211	219
treated	KTIAEGRRI	I	9	P09132	Signal recognition particle 19 kDa protein	27	35
treated	KTIDGQQTI	I	9	P52907	F-actin-capping protein subunit alpha-1	146	154
treated	KTKDGVVEI	I	9	P04792	Heat shock protein beta-1	112	120
treated	KTKVQEEKI	I	9	Q8TCG1	Protein CIP2A	807	815
treated	KTKVQKDEI	I	9	Q72333	Probable helicase senataxin	779	787
treated	KTSGSNVVI	I	9	P56381	ATP synthase subunit epsilon, mitochondrial	37	45
treated	MQNPRQYKI	I	9	P62269	40S ribosomal protein S18	71	79
treated	NLPTKETI	I	9	P63313	Thymosin beta-10	27	35
treated	NTVELRVKI	I	9	P04844	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	361	369
treated	QVFKGAVKI	I	9	P37268	Squalene synthetase	308	316
treated	RSMQNSPSI	I	9	Q8N201	Integrator complex subunit 1	2109	2117
treated	RTQHVKVVI	I	9	Q9BZJ0	Crooked neck-like protein 1	705	713
treated	RTVKDAHSI	I	9	Q8NAV1	Pre-mRNA-splicing factor 38A	4	12
treated	SSAKIVPKI	I	9	Q72417	Nuclear fragile X mental retardation-interacting protein 2	348	356
treated	STTRVKPFI	I	9	Q9Y6A4	UPF0468 protein C16orf80	110	118
treated	SVAQVKAMI	I	9	O15205	Ubiquitin D	111	119
treated	VGARIYHTI	I	9	P10620	Microsomal glutathione S-transferase 1	111	119
treated	VSTGLKVRI	I	9	P13639	Elongation factor 2	421	429
treated	VTGVTRVTI	I	9	Q9H009	Nascent polypeptide-associated complex subunit alpha-2	88	96
treated	GTASVHKVTI	I	10	O60244	Mediator of RNA polymerase II transcription subunit 14	350	359
treated	KAERERGITI	I	10	P68104	Elongation factor 1-alpha 1	64	73
treated	KSAPELKTGI	I	10	P19338	Nucleolin	318	327
treated	KSYEAQDPEI	I	10	Q99622	Protein C10	86	95
treated	KTYQDIQNTI	I	10	P24928	DNA-directed RNA polymerase II subunit RPB1	697	706
treated	LTTKLTNTNI	I	10	P00403	Cytochrome c oxidase subunit 2	46	55
treated	RGVPDAKIRI	I	10	P27635	60S ribosomal protein L10	24	33
treated	RVAQLEQVYI	I	10	P62318	Small nuclear ribonucleoprotein Sm D3	54	63
treated	TTVEDLGSKI	I	10	P35613	Basigin	144	153
treated	KAISNKDQHSI	I	11	Q96FA3	Protein pellino homolog 1	67	77
treated	KTFEEKQGTEI	I	11	P19338	Nucleolin	444	454
treated	VTYPAKAKGTFI	I	12	P04844	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	396	407
treated	KSRESYVL	L	8	Q14249	Endonuclease G, mitochondrial	76	83
treated	RSKKAHVL	L	8	P35221	Catenin alpha-1	54	61
treated	ITAHVEPLL	L	9	Q15306	Interferon regulatory factor 4	401	409
treated	KAASVRPVL	L	9	Q9H269	Vacuolar protein sorting-associated protein 16 homolog	58	66
treated	KAKPVTTNL	L	9	Q8N0T1	Uncharacterized protein C8orf59	28	36
treated	KAVSLQRKL	L	9	Q14966	Zinc finger protein 638	658	666
treated	KSMSGRQKL	L	9	O15212	Prefoldin subunit 6	25	33
treated	KSRKNNYGL	L	9	O76021	Ribosomal L1 domain-containing protein 1	48	56
treated	KTFRDKNL	L	9	Q9NRM2	Zinc finger protein 277	219	227
treated	KTFVQKQTL	L	9	Q8N1W2	Zinc finger protein 710	526	534
treated	KTKAAVVTL	L	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	2019	2027
treated	KVIEINPYL	L	9	P28074	Proteasome subunit beta type-5	92	100
treated	LAPERRSTL	L	9	Q9NX31	Uncharacterized protein C20orf111	226	234

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
treated	LSKPNPPSL	L	9	Q9UJK3	Poly [ADP-ribose] polymerase 4	364	372
treated	LTKKSETL	L	9	P09543	2',3'-cyclic-nucleotide 3'-phosphodiesterase	194	202
treated	QSAKTQIKL	L	9	O60343	TBC1 domain family member 4	444	452
treated	QTKRVKANL	L	9	P35579	Myosin-9	1207	1215
treated	RSRTIVHTL	L	9	Q9NWU5	39S ribosomal protein L22, mitochondrial	198	206
treated	RSTQVKKQL	L	9	O60281	Zinc finger protein 292	1247	1255
treated	RTAQKTALL	L	9	Q9BVM2	Protein DPCD	11	19
treated	SAPSRATAL	L	9	Q6PI47	BTB/POZ domain-containing protein KCTD18	326	334
treated	STIRLLTSL	L	9	P49368	T-complex protein 1 subunit gamma	458	466
treated	STLHLVLR	L	9	P62988	Ubiquitin	65	73
treated	KTKADGSFRL	L	10	Q5JPE7	Nodal modulator 2	358	367
treated	VTATDIRVTL	L	10	P11047	Laminin subunit gamma-1	244	253
treated	KSKDIVNKM	M	9	P52732	Kinesin-like protein KIF11	757	765
treated	KSKNILVRM	M	9	O75394	39S ribosomal protein L33, mitochondrial	12	20
treated	QTARQHPKM	M	9	P01374	Lymphotoxin-alpha	46	54
treated	STRKIHTTM	M	9	Q9H6R4	Nucleolar protein 6	361	369
treated	RAFHHGRFIM	M	10	Q14534	Squalene monooxygenase	222	231
treated	RTAKGEKFVM	M	10	P30101	Protein disulfide-isomerase A3	329	338
treated	KSHSHPSRRM	M	11	Q9UQ35	Serine/arginine repetitive matrix protein 2	471	481
treated	ASANLRVLV	V	9	Q8WW24	Tektin-4	262	270
treated	ATIKLQSTV	V	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	1681	1689
treated	HSIPVTVEV	V	9	Q9UQL6	Histone deacetylase 5	26	34
treated	KAARIRVSV	V	9	Q6P1K8	General transcription factor IIH subunit 2-like protein	190	198
treated	KIYEGQVEV	V	9	P46777	60S ribosomal protein L5	117	125
treated	KSNGTIIHV	V	9	P10747	T-cell-specific surface glycoprotein CD28	127	135
treated	KTIHLTLKV	V	9	O15205	Ubiquitin D	72	80
treated	KVAKVEPAV	V	9	Q9P2E9	Ribosome-binding protein 1	145	153
treated	RSARVTVAV	V	9	Q9UDX5	Mitochondrial fission protein MTP18	73	81
treated	RTFHHGVRV	V	9	Q8NFH4	Nucleoporin Nup37	67	75
treated	RTLAEIAKV	V	9	Q15233	Non-POU domain-containing octamer-binding protein	119	127
treated	RTTETQVLV	V	9	P12081	Histidyl-tRNA synthetase, cytoplasmic	405	413
treated	RVAGIHKV	V	9	P26373	60S ribosomal protein L13	82	90
treated	TVAPFNPTV	V	9	Q96BU1	S100P-binding protein	147	155
treated	VTTDIQVKV	V	9	O00267	Transcription elongation factor SPT5	980	988
treated	ATKRAQAW	W	8	P51149	Ras-related protein Rab-7a	135	142
treated	HSARSHKW	W	8	Q6ZNA4	E3 ubiquitin-protein ligase Arkadia	177	184
treated	KSKNSIQW	W	8	Q15329	Transcription factor E2F5	107	114
treated	KSKSETRW	W	8	Q9Y520	BAT2 domain-containing protein 1	986	993
treated	KTTVHRKW	W	8	P46063	ATP-dependent DNA helicase Q1	353	360
treated	LTNKGHKW	W	8	Q9Y222	Cyclin-D-binding Myb-like transcription factor 1	144	151
treated	QSRRPSSW	W	8	Q13526	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 1	66	73
treated	RSKKAVDW	W	8	Q8WUM9	Sodium-dependent phosphate transporter 1	637	644
treated	STKESPRW	W	8	Q9Y561	Low-density lipoprotein receptor-related protein 12	6	13
treated	AANHVKVAKW	W	9	Q9NR09	Baculoviral IAP repeat-containing protein 6	180	188
treated	ASKVTEQEW	W	9	P09497	Clathrin light chain B	120	128
treated	ATDAAIRVW	W	9	Q12788	WD repeat-containing protein SAZD	58	66
treated	ATSRGAAGW	W	9	Q8WY91	THAP domain-containing protein 4	119	127
treated	ATVTIQRHW	W	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	1396	1404
treated	GTNAKVRTW	W	9	Q9H0H0	Integrator complex subunit 2	308	316
treated	HARGSSRSW	W	9	Q9HCU9	Breast cancer metastasis-suppressor 1	186	194
treated	HATGHHYTW	W	9	P22059	Oxysterol-binding protein 1	567	575
treated	HSRQGSDEW	W	9	Q5PRF9	Sterile alpha motif domain-containing protein 4B	167	175
treated	HSRrSPQW	W	9	Q9UQ35	Serine/arginine repetitive matrix protein 2	505	513
treated	HTSTSKRHW	W	9	Q4ZIN3	Membralin	396	404
treated	ISKRLGKRW	W	9	P35716	Transcription factor SOX-11	79	87
treated	KAAEKKARW	W	9	Q8IV08	Phospholipase D3	30	38
treated	KAGPGLKRW	W	9	Q96N66	Membrane-bound O-acyltransferase domain-containing protein 7	24	32
treated	KAGQVVTIW	W	9	P02545	Lamin-A/C	490	498
treated	KAKVTGDEW	W	9	P13807	Glycogen [starch] synthase, muscle	50	58
treated	KAVARRKNW	W	9	O75821	Eukaryotic translation initiation factor 3 subunit G	94	102
treated	KLQEKARKW	W	9	Q6P2Q9	Pre-mRNA-processing-splicing factor 8	29	37
treated	KSAKNPERW	W	9	Q96P70	Importin-9	900	908
treated	KSFDNIRNW	W	9	P61006	Ras-related protein Rab-8A	94	102

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
treated	KSKKREERW	W	9	Q727A1	Centriolin	1336	1344
treated	KSNPKNSDW	W	9	Q96PP9	Guanylate-binding protein 4	121	129
treated	KSSGAPASW	W	9	Q8IX18	Probable ATP-dependent RNA helicase DHX40	564	572
treated	KTFTGHREW	W	9	P43034	Platelet-activating factor acetylhydrolase IB subunit alpha	228	236
treated	KTPsQRNKW	W	9	Q8IVF7	Formin-like protein 3	957	965
treated	KTSDPGRSW	W	9	Q96JI7	Spatacsin	405	413
treated	LAALRHARW	W	9	Q9UPR6	Zinc finger RNA-binding protein 2	769	777
treated	MSKEKKEEW	W	9	Q08945	FACT complex subunit SSRP1	588	596
treated	MTNGFHMTW	W	9	Q68CL5	Tubulin polyglutamylase complex subunit 2	71	79
treated	NSKRKAETW	W	9	Q9Y2H1	Serine/threonine-protein kinase 38-like	264	272
treated	NSNRDRREW	W	9	O95104	Splicing factor, arginine/serine-rich 15	1025	1033
treated	QSLKSTAKW	W	9	O43665	Regulator of G-protein signaling 10	22	30
treated	RSRHTDSW	W	9	Q9H089	Large subunit GTPase 1 homolog	25	33
treated	RSRRDQKW	W	9	P62266	40S ribosomal protein S23	14	22
treated	RSKAEGKRW	W	9	Q9UNY4	Transcription termination factor 2	80	88
treated	RSKsRSRSW	W	9	O75494	FUS-interacting serine-arginine-rich protein 1	246	254
treated	RTKEEVNEW	W	9	Q9UKD2	mRNA turnover protein 4 homolog	107	115
treated	RTKQAREW	W	9	Q8IY17	Neuropathy target esterase	1022	1030
treated	RTREEGKDW	W	9	Q5JSZ5	Uncharacterized protein KIAA0515	427	435
treated	SAKKASTLW	W	9	Q9P275	Ubiquitin carboxyl-terminal hydrolase 36	692	700
treated	SSARGSRLW	W	9	Q8WUJ1	Cytochrome b5 domain-containing protein 2	180	188
treated	SSDKSVKVV	W	9	Q9GZS3	WD repeat-containing protein 61	251	259
treated	SSKPDPSQW	W	9	O75410	Transforming acidic coiled-coil-containing protein 1	381	389
treated	STKEMRNNW	W	9	Q63HN8	RING finger protein 213	2742	2750
treated	THNQSRKW	W	9	P47914	60S ribosomal protein L29	8	16
treated	TSTKTDQRW	W	9	P49959	Double-strand break repair protein MRE11A	658	666
treated	VSDASKPSW	W	9	Q724G4	tRNA guanosine-2'-O-methyltransferase TRM11 homolog	288	296
treated	VSEQHEHW	W	9	Q7L590	Protein MCM10 homolog	798	806
treated	VSNDRTQTW	W	9	Q9Y2H8	Zinc finger protein 510	365	373
treated	VSRIQEAW	W	9	Q9UI10	Translation initiation factor eIF-2B subunit delta	342	350
treated	VTDNAVYHW	W	9	Q00610	Clathrin heavy chain 1	122	130
treated	VTNPHTDAW	W	9	O75293	Growth arrest and DNA-damage-inducible protein GADD45 beta	122	130
treated	VVKNSVHSW	W	9	Q9NV11	Fanconi anemia group I protein	367	375
treated	AAKPEQIQKW	W	10	Q99986	Serine/threonine-protein kinase VRK1	90	99
treated	ATSTEKSAW	W	10	Q8WZ64	Centaurin-delta-1	311	320
treated	AVNPRDPPSW	W	10	Q9Y490	Talin-1	1621	1630
treated	ESSRDASRKW	W	10	Q8TCU6	Phosphatidylinositol 3,4,5-trisphosphate-dependent Rac exchanger	1358	1367
treated	GSADKTVALW	W	10	Q16576	Histone-binding protein RBBP7	291	300
treated	GSSDSTVRVW	W	10	Q9UKB1	F-box/WD repeat-containing protein 11	296	305
treated	HSVDSGSKRW	W	10	O75427	Leucine-rich repeat/calponin homology domain-containing protein 4	303	312
treated	HTTHNQSRKW	W	10	P47914	60S ribosomal protein L29	7	16
treated	ISSSQDGHQW	W	10	P00451	Coagulation factor VIII	2281	2290
treated	KALETDDKDW	W	10	O60645	Exocyst complex component 3	408	417
treated	KSRGSGEQDW	W	10	Q725L9	Interferon regulatory factor 2-binding protein 2	289	298
treated	KSSIAGSSTW	W	10	Q99808	Equilibrative nucleoside transporter 1	315	324
treated	KSSTPNHKKW	W	10	P11388	DNA topoisomerase 2-alpha	599	608
treated	KTGETASKRW	W	10	Q8TCF1	AN1-type zinc finger protein 1	122	131
treated	KVGSVSVSGW	W	10	Q8WUM9	Sodium-dependent phosphate transporter 1	626	635
treated	LALPPGAEHW	W	10	P42768	Wiskott-Aldrich syndrome protein	55	64
treated	QANSHKERGW	W	10	P13051	Uracil-DNA glycosylase	222	231
treated	RSRSTTAHSW	W	10	Q9UKJ3	G patch domain-containing protein 8	560	569
treated	RTMNIKSATW	W	10	Q16665	Hypoxia-inducible factor 1 alpha	180	189
treated	RVRSHLAALW	W	10	P35613	Basigin	317	326
treated	SATSSSQRDW	W	10	Q96T88	E3 ubiquitin-protein ligase UHRF1	388	397
treated	TSSSVRVEW	W	10	Q9NZ45	CDGSH iron sulfur domain-containing protein 1	4	13
treated	VTQRKDDSTW	W	10	Q9HB58	Sp110 nuclear body protein	395	404
treated	GTYSGKAADVW	W	11	Q96RU8	Tribbles homolog 1	258	268
treated	ITSQVTGQIGW	W	11	Q96CW1	AP-2 complex subunit mu-1	151	161
treated	KGDPPQSPGRHW	W	11	Q5SYE7	NHS-like protein 1	465	475
treated	KTEDTQGKKKW	W	11	Q9ULH0	Ankyrin repeat-rich membrane spanning protein	641	651
treated	LTKEDGEKETW	W	11	Q9NUA8	Zinc finger and BTB domain-containing protein 40	670	680
treated	QTKAKVTGDEW	W	11	P13807	Glycogen [starch] synthase, muscle	48	58
treated	RSAPQKGSSSW	W	12	Q99607	ETS-related transcription factor Elf-4	337	348

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
treated	RTPTKKEKDQAW	W	12	O75528	Transcriptional adapter 3-like	406	417
treated	KSKTNSQKGASSTW	W	14	Q03701	CCAAT/enhancer-binding protein zeta	221	234
treated	KTKQASKNTEKESAW	W	15	Q8WYP5	AT-hook-containing transcription factor 1	2206	2220
treated	RARESYKY	Y	8	Q9P0U4	CpG-binding protein	211	218
treated	RTRKSINY	Y	8	Q9NRZ9	Lymphoid-specific helicase	511	518
treated	ATSTIKRMY	Y	9	Q15361	Transcription termination factor 1	509	517
treated	ITKTVQQR	Y	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	2215	2223
treated	KAALKKEKY	Y	9	P09429	High mobility group protein B1	147	155
treated	KALIYQKKY	Y	9	Q99996	A-kinase anchor protein 9	3717	3725
treated	KSAVKNEEY	Y	9	Q14680	Maternal embryonic leucine zipper kinase	430	438
treated	KSKVSEQR	Y	9	Q9HA38	Zinc finger matrin-type protein 3	271	279
treated	KTGVDLRHY	Y	9	Q8N1B4	Vacuolar protein sorting-associated protein 52 homolog	75	83
treated	KTKKIKEY	Y	9	Q58FF8	Putative heat shock protein HSP 90-beta 2	190	198
treated	KTKKKYATY	Y	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	2058	2066
treated	KTNLRRTY	Y	9	P17844	Probable ATP-dependent RNA helicase DDX5	236	244
treated	KTRGNTPKY	Y	9	O00567	Nucleolar protein 5A	340	348
treated	KTVEPLEYY	Y	9	Q96B26	Exosome complex exonuclease RRP43	6	14
treated	KVRDQQLVY	Y	9	Q9UJX6	Anaphase-promoting complex subunit 2	802	810
treated	RSKEDGRLY	Y	9	Q99640	Membrane-associated Tyr/Thr-specific cdc2-inhibitory kinase	128	136
treated	RSRsRDRMY	Y	9	Q9NYF8	Bcl-2-associated transcription factor 1	45	53
treated	RSRsREQSY	Y	9	Q96594	Cyclin-L2	383	391
treated	RTIKKQRKY	Y	9	Q00059	Transcription factor A, mitochondrial	233	241
treated	RVNTTQKRY	Y	9	P36578	60S ribosomal protein L4	114	122
treated	ITRKGGERTY	Y	10	O75643	U5 small nuclear ribonucleoprotein 200 kDa helicase	596	605
treated	KSKPVNKDRY	Y	10	P62316	Small nuclear ribonucleoprotein Sm D2	86	95
treated	KSLQNAQKH	Y	10	Q14683	Structural maintenance of chromosomes protein 1A	317	326
treated	KSRDGERTVY	Y	10	Q13263	Transcription intermediary factor 1-beta	199	208
treated	KTKEGRDQLY	Y	10	Q9NS00	Glycoprotein-N-acetylgalactosamine 3-beta-galactosyltransferase 1	135	144
treated	RSKPPATVHY	Y	10	Q9NQC8	UPF0360 protein C11orf60	191	200
treated	RSMESRSHHY	Y	10	Q5THJ4	Vacuolar protein sorting-associated protein 13D	228	237
treated	RSRDDADRRY	Y	10	Q5BJF6	Outer dense fiber protein 2	763	772
treated	RVADQRKKAY	Y	10	P09669	Cytochrome c oxidase polypeptide VIc	40	49
treated	VTRPDSGHL	Y	10	Q15418	Ribosomal protein S6 kinase alpha-1	82	91
treated	KAAEAHVDAHY	Y	11	P55263	Adenosine kinase	119	129
treated	KTKPNTKDHGY	Y	11	Q12824	SWI/SNF regulator of chromatin subfamily B member 1	71	81
treated	KTYTGHKNEKY	Y	11	P61964	WD repeat-containing protein 5	250	260
untreated	PKKALHFF	F	8	O95602	DNA-directed RNA polymerase I subunit RPA1	1062	1069
untreated	RSKIAETF	F	8	Q9Y5A7	NEDD8 ultimate buster 1	113	120
untreated	RTRRAVKF	F	8	P83731	60S ribosomal protein L24	71	78
untreated	ASLPLRVSF	F	9	O96005	Cleft lip and palate transmembrane protein 1	299	307
untreated	ATKKEITFF	F	9	P20592	Interferon-induced GTP-binding protein Mx2	342	350
untreated	ATRKAFTTF	F	9	Q14643	Inositol 1,4,5-trisphosphate receptor type 1	1930	1938
untreated	GTFRGTRYF	F	9	Q9NQC7	Probable ubiquitin carboxyl-terminal hydrolase CYLD	516	524
untreated	GTKKQFQKF	F	9	P62280	40S ribosomal protein S11	150	158
untreated	GVHTVHVTF	F	9	P21333	Filamin-A	452	460
untreated	ISNPKTAEF	F	9	Q9NSD9	Phenylalanyl-tRNA synthetase beta chain	439	447
untreated	ISVPIFKQF	F	9	Q00341	Vigilin	584	592
untreated	ITKRKEVIF	F	9	Q8NCY6	Coiled-coil domain-containing protein KIAA1826	24	32
untreated	ITKTQKVRF	F	9	O60287	Nucleolar pre-ribosomal-associated protein 1	257	265
untreated	ITTTINPRF	F	9	P26010	Integrin beta-7	782	790
untreated	KAIEKNVLF	F	9	P10644	cAMP-dependent protein kinase type I-alpha regulatory subunit	130	138
untreated	KAKDLIRF	F	9	Q15208	Serine/threonine-protein kinase 38	352	360
untreated	KAKDLLALF	F	9	Q9H501	ESF1 homolog	361	369
untreated	KAKEIYMTF	F	9	O43665	Regulator of G-protein signaling 10	81	89
untreated	KALKRIHQF	F	9	O00311	Cell division cycle 7-related protein kinase	163	171
untreated	KASGTIKKF	F	9	Q2NL67	Poly [ADP-ribose] polymerase 6	162	170
untreated	KASPTQNL	F	9	P05120	Plasminogen activator inhibitor 2	21	29
untreated	KIKDFASHF	F	9	Q8ND82	Zinc finger protein 280C	627	635
untreated	KSFDFHGF	F	9	Q13432	Protein unc-119 homolog A	173	181
untreated	KSHFRNHKF	F	9	Q5JTD0	Tight junction-associated protein 1	183	191
untreated	KSHTVVIGF	F	9	Q8NG31	Protein CASC5	792	800
untreated	KSKDISKTF	F	9	Q14651	Plastin-1	84	92
untreated	KSLEEIYLF	F	9	P15880	40S ribosomal protein S2	76	84

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	KSMKVVKLF	F	9	Q9Y291	28S ribosomal protein S33, mitochondrial	29	37
untreated	KSVTLGYLF	F	9	P55265	Double-stranded RNA-specific adenosine deaminase	1063	1071
untreated	KSWVFGVHF	F	9	P32248	C-C chemokine receptor type 7	120	128
untreated	KTAENFRQF	F	9	O43447	Peptidyl-prolyl cis-trans isomerase H	38	46
untreated	KTRPRKRF	F	9	Q86TA1	Mps one binder kinase activator-like 2B	13	21
untreated	KTGNVVKRF	F	9	Q8NA23	WD repeat-containing protein 31	91	99
untreated	KTILPLINF	F	9	P16885	1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase	167	175
untreated	KTLPDILTF	F	9	Q13569	G/T mismatch-specific thymine DNA glycosylase	122	130
untreated	KVLDKMKSF	F	9	P06744	Glucose-6-phosphate isomerase	124	132
untreated	LARRLLNRF	F	9	P46777	60S ribosomal protein L5	105	113
untreated	LSKSDHSFF	F	9	P01906	HLA class II histocompatibility antigen, DQ	164	172
untreated	LTAVVQKRF	F	9	P23396	40S ribosomal protein S3	69	77
untreated	RAKAIIVEF	F	9	O60841	Eukaryotic translation initiation factor 5B	790	798
untreated	RANVNARTF	F	9	Q00653	Nuclear factor NF-kappa-B p100 subunit	658	666
untreated	RAYLAQRKF	F	9	O14579	Coatomer subunit epsilon	58	66
untreated	RIKPRPERF	F	9	Q9NP77	RNA polymerase II subunit A C-terminal domain phosphatase	90	98
untreated	RSFHEVERF	F	9	Q92963	GTP-binding protein Rit1	106	114
untreated	RSKPLFHHF	F	9	Q03113	Guanine nucleotide-binding protein subunit alpha-12	342	350
untreated	RSRQEPSRF	F	9	O14647	Chromodomain-helicase-DNA-binding protein 2	114	122
untreated	RSVLHHFHF	F	9	Q15269	Periodic tryptophan protein 2 homolog	87	95
untreated	RTKPFHRKF	F	9	Q9Y5S2	Serine/threonine-protein kinase MRCK beta	1359	1367
untreated	RTNIKRKTF	F	9	Q15022	Polycomb protein SUZ12	124	132
untreated	RTRRYVRKF	F	9	O43633	Charged multivesicular body protein 2a	68	76
untreated	RTTNLIRHF	F	9	Q14592	Zinc finger protein 460	459	467
untreated	SSQKRHWTF	F	9	P51946	Cyclin-H	5	13
untreated	TALPLLKQF	F	9	Q9Y2P8	RNA 3'-terminal phosphate cyclase-like protein	135	143
untreated	VAKVGQYTF	F	9	Q86Y39	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 11	53	61
untreated	VSAQIRKNF	F	9	Q8IU85	Calcium/calmodulin-dependent protein kinase type 1D	293	301
untreated	VSKPDLITF	F	9	Q14586	Zinc finger protein 267	47	55
untreated	YAVRDREMF	F	9	O95298	NADH dehydrogenase [ubiquinone] 1 subunit C2	82	90
untreated	ISKQDAQELF	F	10	Q9BZJ0	Crooked neck-like protein 1	443	452
untreated	ITEKKAIKRF	F	10	O75643	U5 small nuclear ribonucleoprotein 200 kDa helicase	692	701
untreated	KSAEHFKRF	F	10	Q8IXW5	RNA polymerase II-associated protein 2	332	341
untreated	KSKESESVFV	F	10	A2VDJ0	Transmembrane protein 131-like	570	579
untreated	KSLALKEKHF	F	10	Q92673	Sortilin-related receptor	2044	2053
untreated	KSRGIGTVTF	F	10	P52272	Heterogeneous nuclear ribonucleoprotein M	242	251
untreated	KSSQVQRRFF	F	10	P13010	ATP-dependent DNA helicase 2 subunit 2	347	356
untreated	KTRGIFETKF	F	10	P52789	Hexokinase-2	777	786
untreated	KTSEAKIKHF	F	10	Q02880	DNA topoisomerase 2-beta	221	230
untreated	RAGPLSGKFF	F	10	P17844	Probable ATP-dependent RNA helicase DDX5	25	34
untreated	RSKEGLTERF	F	10	Q15046	Lysyl-tRNA synthetase	477	486
untreated	RSVPHLQKVF	F	10	P07355	Annexin A2	220	229
untreated	TTDGYLRLF	F	10	P61247	40S ribosomal protein S3a	129	138
untreated	ASKGPEALQEF	F	11	Q2TAL8	Glutamine-rich protein 1	35	45
untreated	ISAPDKRIYQF	F	11	O75563	Src kinase-associated phosphoprotein 2	189	199
untreated	ITSSAKVDMTF	F	11	Q14318	FK506-binding protein 8	251	261
untreated	KAFAETHIKGF	F	11	P42704	Leucine-rich PPR motif-containing protein, mitochondrial	1090	1100
untreated	KARVETQNHWF	F	11	P28066	Proteasome subunit alpha type-5	91	101
untreated	KAVRDALKTEF	F	11	P56381	ATP synthase subunit epsilon, mitochondrial	21	31
untreated	KSFETDTNLF	F	11	P01848	T-cell receptor alpha chain C region	103	113
untreated	KSKDIVNKMTF	F	11	P52732	Kinesin-like protein KIF11	757	767
untreated	KSRGSNLRVHF	F	11	P18621	60S ribosomal protein L17	16	26
untreated	KTKLDPKAVF	F	11	Q9HCE5	Methyltransferase-like protein KIAA1627	271	281
untreated	KTRGDHFKLRF	F	11	O43257	Zinc finger HIT domain-containing protein 1	70	80
untreated	KTRSSRAGLQF	F	11	Q96KK5	Histone H2A type 1-H	16	26
untreated	KVDEVKSTIKF	F	11	P62906	60S ribosomal protein L10a	147	157
untreated	KVLKEIVERVF	F	11	Q14444	Caprin-1	231	241
untreated	RADPKKALHFF	F	11	O95602	DNA-directed RNA polymerase I subunit RPA1	1059	1069
untreated	RTKDLIEQRF	F	11	Q00341	Vigilin	508	518
untreated	RTLVPDSSHGF	F	11	Q6P4F7	Rho GTPase-activating protein 11A	328	338
untreated	RVDPAKGLFYF	F	11	O75643	U5 small nuclear ribonucleoprotein 200 kDa helicase	666	676
untreated	KSIDGKDAVHSF	F	12	Q8NEL9	Phospholipase DDHD1	331	342
untreated	KTKKPLLI	I	8	Q9BSR8	Protein YIPF4	220	227

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	FSKRIQKSI	I	9	O75446	Histone deacetylase complex subunit SAP30	85	93
untreated	HTKRMQHVH	I	9	Q9NV06	WD repeat and SOF domain-containing protein 1	321	329
untreated	KARDTKVLI	I	9	Q9UBH6	Xenotropic and polytropic retrovirus receptor 1	679	687
untreated	KSMKREYII	I	9	Q8WYP5	AT-hook-containing transcription factor 1	259	267
untreated	KTKIYHPNI	I	9	P68036	Ubiquitin-conjugating enzyme E2 L3	71	79
untreated	KTRQIISTI	I	9	P37268	Squalene synthetase	358	366
untreated	KTRQTIPRI	I	9	Q65J93	Protein FAM111B	337	345
untreated	KVMSQRHMI	I	9	Q13148	TAR DNA-binding protein 43	160	168
untreated	RALPHHRVI	I	9	Q5JPE7	Nodal modulator 2	1028	1036
untreated	VSKPLAHHI	I	9	P55145	Protein ARMET	89	97
untreated	KSAEAVGVKI	I	10	P27694	Replication protein A 70 kDa DNA-binding subunit	103	112
untreated	KTGDHTLVQTI	I	11	Q14684	Ribosomal RNA processing protein 1 homolog B	202	212
untreated	RTLEDRGIRKI	I	11	Q9Y2X3	Nucleolar protein 5	396	406
untreated	ASRPPVTL	L	8	Q15365	Poly	93	100
untreated	ISSTVQRQL	L	9	Q6PJF5	Rhomboid family member 2	386	394
untreated	KALELERKL	L	9	Q9BWW8	Apolipoprotein L6	274	282
untreated	KAMELIREL	L	9	Q14691	DNA replication complex GINS protein PSF1	5	13
untreated	KAYEIEKRL	L	9	Q9UPP1	PHD finger protein 8	381	389
untreated	KAYPKRPLL	L	9	Q9GZR7	ATP-dependent RNA helicase DDX24	381	389
untreated	KSIVKVKKL	L	9	Q14692	Ribosome biogenesis protein BMS1 homolog	1019	1027
untreated	KSIRQRNLL	L	9	P23458	Tyrosine-protein kinase JAK1	227	235
untreated	KTFTIKRFL	L	9	Q96EH5	60S ribosomal protein L39-like	5	13
untreated	KTFVGRAKL	L	9	Q9Y4K1	Absent in melanoma 1 protein	301	309
untreated	KTKEAVLLL	L	9	P36578	60S ribosomal protein L4	163	171
untreated	KTLATQRRL	L	9	Q9UIF9	Bromodomain adjacent to zinc finger domain protein 2A	772	780
untreated	KTLEERSYLL	L	9	P23921	Ribonucleoside-diphosphate reductase large subunit	149	157
untreated	KTRSPKPLL	L	9	Q13724	Mannosyl-oligosaccharide glucosidase	108	116
untreated	KTVRGRPKL	L	9	Q6NYC1	Histone arginine demethylase JMJD6	300	308
untreated	KVREIIQKL	L	9	P13797	Plastin-3	49	57
untreated	RSIEKRDTL	L	9	Q9H6F5	Coiled-coil domain-containing protein 86	337	345
untreated	RSRKLKFL	L	9	P41252	Isoleucyl-tRNA synthetase, cytoplasmic	1225	1233
untreated	RSVRLYHLL	L	9	Q14137	Ribosome biogenesis protein BOP1	600	608
untreated	RTVEKTWKL	L	9	Q13191	E3 ubiquitin-protein ligase CBL-B	44	52
untreated	YSARQRRRL	L	9	P62841	40S ribosomal protein S15	37	45
untreated	KISRETGEKL	L	10	O60880	SH2 domain-containing protein 1A	10	19
untreated	KTMLDDDKRQL	L	11	Q9HAW4	Claspin	1104	1114
untreated	VASKEIGKRKL	L	11	O60293	Coiled-coil domain-containing protein 131	923	933
untreated	WTSRQVGERTL	L	11	Q9C0K3	Actin-related protein 11	24	34
untreated	RTGKSYLM	M	8	Q96PP8	Guanylate-binding protein 5	48	55
untreated	KSIHIVVTM	M	9	Q13291	Signaling lymphocytic activation molecule	58	66
untreated	KTKIDIIRM	M	9	Q16512	Serine/threonine-protein kinase N1	174	182
untreated	KTKEVAKM	M	9	Q9NRD5	PRKCA-binding protein	81	89
untreated	MARKINFLM	M	9	P82921	28S ribosomal protein S21, mitochondrial	68	76
untreated	KSLPAEINRM	M	10	Q9H9A6	Leucine-rich repeat-containing protein 40	210	219
untreated	HKQKQKvKRkLkNQ	Q	14	Q6UB98	Ankyrin repeat domain-containing protein 12	466	479
untreated	HSVEVHKW	W	8	Q96CP6	GRAM domain-containing protein 1A	674	681
untreated	HSYRGHLW	W	8	P40337	Von Hippel-Lindau disease tumor suppressor	110	117
untreated	IAKIPNFW	W	8	Q01105	Protein SET	88	95
untreated	KIKVPVDW	W	8	P13796	Plastin-2	432	439
untreated	LSKIGEVM	W	8	Q8WYP5	AT-hook-containing transcription factor 1	1068	1075
untreated	RTRKEAAW	W	8	O15131	Importin subunit alpha-6	393	400
untreated	RVVKHFYW	W	8	O00626	C-C motif chemokine 22	48	55
untreated	VSKTSIGW	W	8	Q9NR09	Baculoviral IAP repeat-containing protein 6	3295	3302
untreated	AAKAVLADW	W	9	Q9NVN8	Guanine nucleotide-binding protein-like 3-like protein	384	392
untreated	AARKHILVW	W	9	Q6P5X5	UPF0545 protein C22orf39	77	85
untreated	AARVLQEAW	W	9	O15554	Intermed conductance calcium-activated potassium channel protein	315	323
untreated	ASAIHQRW	W	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	2068	2076
untreated	ASAPLGARW	W	9	Q96AQ1	Coiled-coil domain-containing protein 74A	109	117
untreated	ASKKVQRPW	W	9	P05166	Propionyl-CoA carboxylase beta chain, mitochondrial	523	531
untreated	ASLDISRKW	W	9	Q9NWU5	39S ribosomal protein L22, mitochondrial	37	45
untreated	ATADVEWRW	W	9	Q96G21	U3 small nucleolar ribonucleoprotein protein IMP4	267	275
untreated	ATLKGNAAW	W	9	P07814	Bifunctional aminoacyl-tRNA synthetase	126	134
untreated	ATLKNPILW	W	9	P04844	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	488	496

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	ATRSQGDLW	W	9	Q9BV29	Uncharacterized protein C15orf57	11	19
untreated	ATVGRRYLW	W	9	P42166	Lamina-associated polypeptide 2, isoform alpha	646	654
untreated	AVDSTVKVW	W	9	Q6Q0C0	E3 ubiquitin-protein ligase TRAF7	660	668
untreated	ETFHHSSNW	W	9	Q9UNY4	Transcription termination factor 2	113	121
untreated	FSLPAQPLW	W	9	O60216	Double-strand-break repair protein rad21 homolog	373	381
untreated	GSASVNSRW	W	9	Q55W79	Centrosomal protein of 170 kDa	1222	1230
untreated	GSMGLRSLW	W	9	Q9BV87	Uncharacterized protein C2orf24	301	309
untreated	GTHSLDIKW	W	9	Q9UHQ1	Nuclear prelamin A recognition factor	448	456
untreated	HAAKTKQAW	W	9	Q8N3C0	Activating signal cointegrator 1 complex subunit 3	2019	2027
untreated	HARPEPSW	W	9	Q9NQ89	Uncharacterized protein C12orf4	113	121
untreated	HSLTKRREW	W	9	A6NDU8	UPF0600 protein C5orf51	144	152
untreated	HSRNLHHKW	W	9	Q13615	Myotubularin-related protein 3	985	993
untreated	HSSGILPKW	W	9	Q8NDX1	PH and SEC7 domain-containing protein 4	475	483
untreated	IAAQRTINW	W	9	Q5T4S7	E3 ubiquitin-protein ligase UBR4	3282	3290
untreated	IALPPIAKW	W	9	P50851	Lipopolysaccharide-responsive and beige-like anchor protein	217	225
untreated	IAQSLEHSW	W	9	O43293	Death-associated protein kinase 3	266	274
untreated	ILRPPVEKW	W	9	Q5VYS8	Zinc finger CCHC domain-containing protein 6	1432	1440
untreated	IMKDKDNFW	W	9	P61160	Actin-related protein 2	364	372
untreated	ISAIPEQRW	W	9	O94953	JmjC domain-containing histone demethylation protein 3B	840	848
untreated	ISGHPETW	W	9	Q9Y385	Ubiquitin-conjugating enzyme E2 J1	94	102
untreated	IVRKDRHLW	W	9	Q8IZT6	Abnormal spindle-like microcephaly-associated protein	795	803
untreated	KAKANLIGW	W	9	Q8WWQ0	PH-interacting protein	1813	1821
untreated	KAKTNVKLW	W	9	P10644	cAMP-dependent protein kinase type I-alpha regulatory subunit	216	224
untreated	KAVFLVPKW	W	9	Q9H2M9	Rab3 GTPase-activating protein non-catalytic subunit	96	104
untreated	KGKNISSHW	W	9	Q96TA2	ATP-dependent metalloprotease YME1L1	144	152
untreated	KGRTIILKW	W	9	Q96TA2	ATP-dependent metalloprotease YME1L1	510	518
untreated	KILSNQEEW	W	9	O75791	GRB2-related adapter protein 2	26	34
untreated	KLKPLLEKW	W	9	Q9UKI9	POU domain, class 2, transcription factor 3	244	252
untreated	KLKTVKENW	W	9	Q00059	Transcription factor A, mitochondrial	181	189
untreated	KSAFVRTQW	W	9	Q9UKY1	Zinc fingers and homeoboxes protein 1	676	684
untreated	KSGAIIEKW	W	9	Q67FW5	UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase-like	61	69
untreated	KSIDLIQKW	W	9	P49585	Choline-phosphate cytidylyltransferase A	270	278
untreated	KSRLSISGW	W	9	Q8N543	2-oxoglutarate/Fe-dependent oxygenase domain-containing protein	228	236
untreated	KTAEKQKW	W	9	Q8TCU6	Phosphatidylinositol 3,4,5-trisphosphate-dependent Rac exchanger	375	383
untreated	KTQGPRALW	W	9	Q96AG3	Solute carrier family 25 member 46	152	160
untreated	KTSSRRTTW	W	9	Q9BX40	Protein LSM14 homolog B	327	335
untreated	KTSVVVGTW	W	9	Q96DZ1	XTP3-transactivated gene B protein	373	381
untreated	KTVAIHTLW	W	9	Q92835	Phosphatidylinositol-3,4,5-trisphosphate 5-phosphatase 1	478	486
untreated	KVKHGHFGW	W	9	Q13501	Sequestosome-1	187	195
untreated	KVKKTIPSW	W	9	Q5SSJ5	Heterochromatin protein 1-binding protein 3	128	136
untreated	KVLLILSKW	W	9	Q9HCE0	UPF0493 protein KIAA1632	2394	2402
untreated	LARVLREDW	W	9	Q92845	Kinesin-associated protein 3	179	187
untreated	LSKLVVVRW	W	9	Q96H35	Probable RNA-binding protein 18	95	103
untreated	LSQPKIVKW	W	9	P61769	Beta-2-microglobulin	107	115
untreated	LTSPDSEKW	W	9	Q9NR09	Baculoviral IAP repeat-containing protein 6	670	678
untreated	LTSRVTAHW	W	9	Q9UFC0	Leucine-rich repeat and WD repeat-containing protein 1	141	149
untreated	LWKAQNTW	W	9	P02545	Lamin-A/C	512	520
untreated	MSNKHGWTW	W	9	Q9Y3M8	StAR-related lipid transfer protein 13	633	641
untreated	NSRKQEAEW	W	9	P09496	Clathrin light chain A	127	135
untreated	NSRSEAPNW	W	9	P60228	Eukaryotic translation initiation factor 3 subunit E	429	437
untreated	QAFPNTNRW	W	9	P26641	Elongation factor 1-gamma	182	190
untreated	QSAKEQIKW	W	9	P61923	Coatomer subunit zeta-1	165	173
untreated	QSHLNKALW	W	9	O60566	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta	1028	1036
untreated	QSLQIFRKW	W	9	Q5TA45	Integrator complex subunit 11	332	340
untreated	QTVSPAEKW	W	9	Q16658	Fascin	124	132
untreated	RAGPKKESW	W	9	Q96GQ5	UPF0420 protein C16orf58	409	417
untreated	RAKDRKDVW	W	9	Q4LE39	AT-rich interactive domain-containing protein 4B	920	928
untreated	RALAHYRWW	W	9	Q9Y2R9	28S ribosomal protein S7, mitochondrial	234	242
untreated	RALQLHLHW	W	9	Q16790	Carbonic anhydrase 9	221	229
untreated	RALVKRVTW	W	9	Q9P1Y6	PHD and RING finger domain-containing protein 1	1397	1405
untreated	RQSTILKRW	W	9	Q96CS7	Pleckstrin homology domain-containing family B member 2	11	19
untreated	RSHDTLVRW	W	9	Q9NU22	Midasin	177	185
untreated	RTLKDRHW	W	9	O14776	Transcription elongation regulator 1	923	931

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	RVAHFGYHW	W	9	O15239	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 1	37	45
untreated	RVKTHLPSW	W	9	P17026	Zinc finger protein 22	203	211
untreated	RVLREHHLW	W	9	Q9Y3M8	StAR-related lipid transfer protein 13	969	977
untreated	RVRELYRAW	W	9	P56556	NADH dehydrogenase [ubiquinone] 1 alpha subcomplex subunit 6	31	39
untreated	RVRTPARQW	W	9	Q9BV79	Trans-2-enoyl-CoA reductase, mitochondrial	9	17
untreated	SADGTLKLW	W	9	O14727	Apoptotic protease-activating factor 1	762	770
untreated	SAKRVAESW	W	9	Q9H7M6	Zinc finger SWIM domain-containing protein 4	39	47
untreated	SATRTLHEW	W	9	P27708	CAD protein	99	107
untreated	SSKANPHRW	W	9	Q4G0I0	Protein CCSMST1	54	62
untreated	SSRNYQQHW	W	9	Q8TEM1	Nuclear pore membrane glycoprotein 210	699	707
untreated	SSRQIISHW	W	9	Q92793	CREB-binding protein	411	419
untreated	SSVRAVAVW	W	9	Q9NNW5	WD repeat-containing protein 6	775	783
untreated	STDKTVRLW	W	9	O75529	TAF5-like RNA polymerase II p300/CBP-associated factor	445	453
untreated	STDRHIRLW	W	9	Q9GZL7	WD repeat-containing protein 12	316	324
untreated	TAADVVKQW	W	9	Q15311	RalA-binding protein 1	155	163
untreated	TAKALQAHW	W	9	Q96E28	Microspherule protein 1	247	255
untreated	TSQDVLHSW	W	9	P00403	Cytochrome c oxidase subunit 2	155	163
untreated	TTAPEFRRW	W	9	P22695	Cytochrome b-c1 complex subunit 2, mitochondrial	141	149
untreated	VAKKLGEMW	W	9	Q9UGV6	High mobility group protein 1-like 10	125	133
untreated	VSFAEKNGW	W	9	O43181	NADH dehydrogenase iron-sulfur protein 4, mitochondrial	135	143
untreated	VSKIGDKNW	W	9	Q14008	Cytoskeleton-associated protein 5	866	874
untreated	VSTRQTQSW	W	9	Q96B23	Uncharacterized protein C18orf25	365	373
untreated	VTRAKQIVW	W	9	P00558	Phosphoglycerate kinase 1	328	336
untreated	YTKFQIATW	W	9	Q15800	C-4 methylsterol oxidase	44	52
untreated	AAADSAVRLW	W	10	Q6IA86	Elongator complex protein 2	133	142
untreated	AAALPAAALW	W	10	Q03518	Antigen peptide transporter 1	205	214
untreated	ASARAGIHLW	W	10	Q9HAY2	Melanoma-associated antigen F1	299	308
untreated	ATILGNTERW	W	10	Q9UFH2	Dynein heavy chain 17, axonemal	3415	3424
untreated	ATKVLGTVKW	W	10	P16989	DNA-binding protein A	88	97
untreated	AVNKMDQVNW	W	10	Q9Y450	HBS1-like protein	404	413
untreated	GSWDGTLRLW	W	10	P63244	Guanine nucleotide-binding protein subunit beta-2-like 1	81	90
untreated	GTKKYDLSKW	W	10	Q9UM54	Myosin-VI	1080	1089
untreated	HSKAVHVAW	W	10	Q96J01	THO complex subunit 3	54	63
untreated	HSARVGSLSW	W	10	Q12834	Cell division cycle protein 20 homolog	267	276
untreated	HSLNKEARKW	W	10	O94868	FCH and double SH3 domains protein 2	322	331
untreated	HTADVQLHAW	W	10	Q8IWT0	Protein archease	36	45
untreated	HTAVVEDVSW	W	10	Q09028	Histone-binding protein RBBP4	226	235
untreated	HTEARARHAW	W	10	P41273	Tumor necrosis factor ligand superfamily member 9	217	226
untreated	HTQDVKHVVW	W	10	O76071	Protein CIAO1	149	158
untreated	ISDPDVRHTW	W	10	P51805	Plexin-A3	1706	1715
untreated	KAFDEKKQKW	W	10	Q53T94	TATA box-binding protein-associated factor RNA polymerase I	409	418
untreated	KAKHLASQYW	W	10	Q66K14	TBC1 domain family member 9B	828	837
untreated	KALSDAIKKW	W	10	Q9NWF9	E3 ubiquitin-protein ligase RNF216	406	415
untreated	KARQGDDLGW	W	10	Q9Y237	Peptidyl-prolyl cis-trans isomerase NIMA-interacting 4	75	84
untreated	KAVDIVKQVW	W	10	Q460N5	Poly [ADP-ribose] polymerase 14	645	654
untreated	KAWRGTLARW	W	10	B011T2	Myosin-Ig	719	728
untreated	KLKKEAVRW	W	10	Q9Y220	Suppressor of G2 allele of SKP1 homolog	245	254
untreated	KLMPGRIQLW	W	10	A0AV96	RNA-binding protein 47	213	222
untreated	KSEALKDRHW	W	10	Q14204	Cytoplasmic dynein 1 heavy chain 1	1404	1413
untreated	KSFEKAKESW	W	10	Q13451	FK506-binding protein 5	248	257
untreated	KSHYDEAYKW	W	10	Q92624	Amyloid protein-binding protein 2	219	228
untreated	KSLSAERERW	W	10	Q14204	Cytoplasmic dynein 1 heavy chain 1	3480	3489
untreated	KSTPYTAVRW	W	10	O15258	Protein RER1	35	44
untreated	KSVKTSVFW	W	10	Q8TCJ2	Dolichyl-diphosphooligosaccharide--protein glycosyltransferase	239	248
untreated	KTKRVLPPNW	W	10	P62277	40S ribosomal protein S13	130	139
untreated	KTLAEQNKW	W	10	Q99728	BRCA1-associated RING domain protein 1	209	218
untreated	KTPEKEPLW	W	10	O14715	RANBP2-like and GRIP domain-containing protein 8	626	635
untreated	KTRDDWLVSW	W	10	P78527	DNA-dependent protein kinase catalytic subunit	3267	3276
untreated	KSELLVRKW	W	10	Q9BVM2	Protein DPCD	43	52
untreated	KVFESWMHHW	W	10	P04233	HLA class II histocompatibility antigen gamma chain	179	188
untreated	KVFKEKHSW	W	10	Q5TBB1	Ribonuclease H2 subunit B	64	73
untreated	KVREFNFEKW	W	10	P78347	General transcription factor II-I	345	354
untreated	LTKSIGHQW	W	10	P00403	Cytochrome c oxidase subunit 2	95	104

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	QTRRFQTETW	W	10	Q9UHB4	NADPH-dependent diflavin oxidoreductase 1	587	596
untreated	RARHAQGGTW	W	10	Q99832	T-complex protein 1 subunit eta	465	474
untreated	RGFQSQVKKW	W	10	O43159	Cerebral protein 1	282	291
untreated	RGGDFKGRKW	W	10	Q96SK2	Transmembrane protein 209	430	439
untreated	RMYPKPTWW	W	10	P05023	Sodium/potassium-transporting ATPase subunit alpha-1	979	988
untreated	RSKDVAKILW	W	10	Q7L8L6	FAST kinase domain-containing protein 5	426	435
untreated	RSLKDALFKW	W	10	P40818	Ubiquitin carboxyl-terminal hydrolase 8	275	284
untreated	RSNQWHGRSW	W	10	Q9BTL3	Protein FAM103A1	78	87
untreated	RSRARAGELW	W	10	Q9BXR0	Queuine tRNA-ribosyltransferase	9	18
untreated	RSSQFARKLW	W	10	Q62NJ1	Neurobeachin-like protein 2	2723	2732
untreated	RSVAQAGVQW	W	10	Q6UX73	Uncharacterized protein C16orf89	321	330
untreated	RSVGRISKQW	W	10	Q9NRY6	Phospholipid scramblase 3	231	240
untreated	RSWDQQIKLW	W	10	Q14493	Histone RNA hairpin-binding protein	181	190
untreated	RTAPFHLDLW	W	10	Q9NWW5	Ceroid-lipofuscinosis neuronal protein 6	39	48
untreated	RTAQLAKIKW	W	10	O00258	Tryptophan-rich protein	93	102
untreated	RTRLEQVHEW	W	10	Q9P2E3	NFX1-type zinc finger-containing protein 1	1731	1740
untreated	RTTYEKLLW	W	10	P35222	Catenin beta-1	329	338
untreated	RVDPDVAQHW	W	10	Q9NYR9	NF-kappa-B inhibitor-interacting Ras-like protein 2	129	138
untreated	RVINEEYKIW	W	10	Q16576	Histone-binding protein RBBP7	14	23
untreated	RVKAEPFIKW	W	10	P55010	Eukaryotic translation initiation factor 5	372	381
untreated	SAKSARLNLW	W	10	Q7KZF4	Staphylococcal nuclease domain-containing protein 1	884	893
untreated	SSKRAELEKW	W	10	Q9UH65	Switch-associated protein 70	458	467
untreated	SSSPEVKGYW	W	10	Q15366	Poly	270	279
untreated	VAKPNIGENW	W	10	O60306	Intron-binding protein aquarius	522	531
untreated	VSAEGLVHW	W	10	P15260	Interferon-gamma receptor alpha chain	215	224
untreated	VSMDEKKEKW	W	10	O15260	Surfeit locus protein 4	260	269
untreated	AALDSRKNYNW	W	11	Q9BYN8	28S ribosomal protein S26, mitochondrial	179	189
untreated	ATFHQRGIALW	W	11	P55884	Eukaryotic translation initiation factor 3 subunit B	350	360
untreated	ATIKDIREHEW	W	11	P54646	5'-AMP-activated protein kinase catalytic subunit alpha-2	257	267
untreated	FAYKDQENRW	W	11	Q99590	SFRS2-interacting protein	772	782
untreated	HSLGVHGLAFW	W	11	Q86X55	Histone-arginine methyltransferase CARM1	380	390
untreated	HSGPRGTHDLW	W	11	Q04446	1,4-alpha-glucan-branching enzyme	312	322
untreated	HSKENPKFFW	W	11	Q8N999	Uncharacterized protein C12orf29	95	105
untreated	HSYSPRAIHSW	W	11	P28070	Proteasome subunit beta type-4	126	136
untreated	HTIGGSRRAAW	W	11	P61313	60S ribosomal protein L15	182	192
untreated	ITIPDIKDRW	W	11	O14757	Serine/threonine-protein kinase Chk1	254	264
untreated	ITYDDPIKTSW	W	11	Q9UJV9	Probable ATP-dependent RNA helicase DDX41	136	146
untreated	IVDPNGLARLW	W	11	P41212	Transcription factor ETV6	370	380
untreated	KAKYPDYEVTW	W	11	Q9NWX4	14 kDa phosphohistidine phosphatase	110	120
untreated	KITSVHSRIIW	W	11	Q6IA86	Elongator complex protein 2	663	673
untreated	KSFIQKKMQNW	W	11	Q9BY44	Eukaryotic translation initiation factor 2A	121	131
untreated	KSFSKSDLVNW	W	11	O43847	Nardilysin	1060	1070
untreated	KSIDAGPVDAAW	W	11	Q9GZ53	WD repeat-containing protein 61	100	110
untreated	KSRDLFVSTSW	W	11	Q9BRQ8	Apoptosis-inducing factor 2	355	365
untreated	KSVSAAEQQLW	W	11	Q3B7T1	Erythroid differentiation-related factor 1	866	876
untreated	KTAGYQAVKRW	W	11	Q9P0U3	Sentrin-specific protease 1	502	512
untreated	KTVYTGIDHHW	W	11	Q9NV06	WD repeat and SOF domain-containing protein 1	156	166
untreated	KVDPADRELW	W	11	O60861	Growth arrest-specific protein 7	450	460
untreated	LTKQGGLVKTW	W	11	Q9UN19	Dual Adapter for phosphotyrosine and 3-phosphoinositide	171	181
untreated	QTLKHPQTAKW	W	11	Q8WU76	Sec1 family domain-containing protein 2	415	425
untreated	RAAGALSKRYW	W	11	Q9H497	Torsin-3A	53	63
untreated	RAFQAHKKEENW	W	11	Q5JVF3	PCI domain-containing protein 2	93	103
untreated	RAIAAHERQAW	W	11	Q9NNW5	WD repeat-containing protein 6	302	312
untreated	RGTTILAKHAW	W	11	P51809	Vesicle-associated membrane protein 7	10	20
untreated	RSTLGHRSRSHW	W	11	Q6ZNA4	E3 ubiquitin-protein ligase Arkadia	338	348
untreated	RTREDIEGSHW	W	11	Q5XP14	E3 ubiquitin-protein ligase RNF123	715	725
untreated	RVLPPSHRVTW	W	11	P15498	Proto-oncogene vav	15	25
untreated	RVLPPYFTHHW	W	11	Q9BVJ6	U3 small nucleolar RNA-associated protein 14 homolog A	683	693
untreated	SASRDKIIMW	W	11	P63244	Guanine nucleotide-binding protein subunit beta-2-like 1	33	43
untreated	SSSLDAHIRLW	W	11	Q9GZ53	WD repeat-containing protein 61	81	91
untreated	SVSKDHALRLW	W	11	O75530	Polycomb protein EED	208	218
untreated	TVSEIKASLKW	W	11	Q96H20	Vacuolar-sorting protein SNF8	194	204
untreated	VAKRNSLKELW	W	11	O43169	Cytochrome b5 type B	28	38

Sample	Peptide Sequence*	C-terminus	Length	Accession	Source Protein	Start	Stop
untreated	VSPFDVEKAEW	W	11	Q9BSJ8	Extended synaptotagmin-1	131	141
untreated	VTLHDQGTAAW	W	11	P22314	Ubiquitin-like modifier-activating enzyme 1	99	109
untreated	VTSIGTAIRYW	W	11	O60337	E3 ubiquitin-protein ligase MARCH6	83	93
untreated	ASAGVDTNVRW	W	12	Q13112	Chromatin assembly factor 1 subunit B	33	44
untreated	ATSGNDGTIRVW	W	12	Q15751	Probable E3 ubiquitin-protein ligase HERC1	3444	3455
untreated	KLADPDEVARRW	W	12	P15036	Protein C-ets-2	392	403
untreated	KSFQDPAKPRAW	W	12	Q9Y4C8	Probable RNA-binding protein 19	78	89
untreated	KSHLHQKPGQTW	W	12	Q96Q83	Alpha-ketoglutarate-dependent dioxygenase alkB homolog 3	31	42
untreated	KSRGYVKEQFAW	W	12	P46783	40S ribosomal protein S10	53	64
untreated	VSSSHDKSLRLW	W	12	Q9UNX4	WD repeat-containing protein 3	691	702
untreated	RTFGHSGIAVHTW	W	13	Q9P2Q2	FERM domain-containing protein 4A	285	297
untreated	GTWKHARRY	Y	9	Q86T03	Transmembrane protein 55B	232	240
untreated	ITRQKQLFY	Y	9	Q9Y690	Putative transcription factor-like protein MORF4	87	95
untreated	KARIQEAVY	Y	9	Q8TEM1	Nuclear pore membrane glycoprotein 210	219	227
untreated	KIRELQLRY	Y	9	Q5H9J7	Protein BEX5	81	89
untreated	KSFKKKFFY	Y	9	Q8N1G2	FtsJ methyltransferase domain-containing protein 2	764	772
untreated	KSFPGGKEY	Y	9	Q9Y6Q5	AP-1 complex subunit mu-2	346	354
untreated	KSLALLLNY	Y	9	Q9Y690	Putative transcription factor-like protein MORF4	194	202
untreated	KSRPELLEY	Y	9	Q14258	Tripartite motif-containing protein 25	447	455
untreated	KTRIPPRTY	Y	9	Q9BWU0	Kanadaplin	246	254
untreated	LTVQVARVY	Y	9	P57076	Uncharacterized protein C21orf59	27	35
untreated	RIRRDVRVY	Y	9	Q86VU5	Catechol-O-methyltransferase domain-containing protein 1	238	246
untreated	RSILRNHRY	Y	9	Q6IN85	Serine/threonine-protein phosphatase 4 regulatory subunit 3A	660	668
untreated	RSRDIRIKY	Y	9	O14511	Pro-neuregulin-2, membrane-bound isoform	279	287
untreated	RTAHVILRY	Y	9	Q9UKV5	Autocrine motility factor receptor, isoform 2	229	237
untreated	RTKNNIQRY	Y	9	Q92665	28S ribosomal protein S31, mitochondrial	51	59
untreated	RTLPLVLLY	Y	9	Q9NR09	Baculoviral IAP repeat-containing protein 6	597	605
untreated	RTRVGVVRY	Y	9	Q8NFW1	Collagen alpha-1	74	82
untreated	RTVRIWRQY	Y	9	O76071	Protein CIAO1	216	224
untreated	VSFQHPHKY	Y	9	P0C7Q3	Cyclin-related protein FAM58B	140	148
untreated	VTTVVPKPY	Y	9	P05556	Integrin beta-1	787	795
untreated	KARPIPRSTY	Y	10	Q3B820	UPF0564 protein FAM161A	356	365
untreated	KSFPARLRQY	Y	10	Q14204	Cytoplasmic dynein 1 heavy chain 1	1371	1380
untreated	KSVENLGSVY	Y	10	P49643	DNA primase large subunit	54	63
untreated	KTLTPIIQY	Y	10	Q53EL6	Programmed cell death protein 4	166	175
untreated	KTVAGGAWTY	Y	10	P61513	60S ribosomal protein L37a	62	71
untreated	QTVKDSRTVY	Y	10	P78371	T-complex protein 1 subunit beta	399	408
untreated	RSLSDLFRRY	Y	10	O75410	Transforming acidic coiled-coil-containing protein 1	686	695
untreated	RSRKESYSVY	Y	10	P62807	Histone H2B type 1-C/E/F/G/I	32	41
untreated	ASMPRDIYQDY	Y	11	O15226	NF-kappa-B-repressing factor	90	100
untreated	GSSLPADVHRY	Y	11	Q96KA5	Cleft lip and palate transmembrane protein 1-like protein	187	197
untreated	ITKPQNLNDAY	Y	11	O60493	Sorting nexin-3	12	22
untreated	KIADMGLKYY	Y	11	P12004	Proliferating cell nuclear antigen	240	250
untreated	KSMGNLKHKQY	Y	11	Q96AP4	Zinc finger with UFM1-specific peptidase domain protein	538	548
untreated	KSSPQIPHQTY	Y	11	Q16659	Mitogen-activated protein kinase 6	703	713
untreated	KTKPTHGIGKY	Y	11	Q96GC5	39S ribosomal protein L48, mitochondrial	49	59
untreated	KTLPADVQNY	Y	11	Q99590	SFRS2-interacting protein	837	847
untreated	KTMPNTTSTRY	Y	11	Q9UPV9	Trafficking kinesin-binding protein 1	353	363
untreated	KTRIIDGLKY	Y	11	P30876	DNA-directed RNA polymerase II subunit RPB2	436	446
untreated	KTRTLMKDSY	Y	11	O15492	Regulator of G-protein signaling 16	158	168
untreated	KVRESERAFTY	Y	11	Q9BYT1	Uncharacterized MFS-type transporter C20orf59	146	156
untreated	RAKPEYISKTY	Y	11	Q13823	Nucleolar GTP-binding protein 2	400	410
untreated	KTLQHDKLVRLY	Y	12	P07948	Tyrosine-protein kinase Lyn	295	306

*s and t = pSer and pThr, respectively.