

Supporting Information S1. The benchmark dataset S_P used to train and test the model for predicting the possibility of hydroxylation at Pro site. It contains 851 positive samples and 3505 negative samples, of which were extracted from the 164 hydroxylation proteins. See the main text for further explanation.

(1)List of the 851 peptide samples in the positive subset

Sample #	Protein ID	Site	Sequences
1	A1X158	43	PKPWTAWKVHPPAWTAWKAHP
2	A1X158	53	PPAWTAWKAHPAWTAWKATP
3	A1X158	65	AWTAWKATPKPWTAWKAPPPA
4	A1X158	72	TPKPWTAWKAPPAWTAWKAT
5	A1X158	73	PKPWTAWKAPPAWTAWKATP
6	A1X158	85	AWTAWKATPKPWTAWKAPPPT
7	A1X158	92	TPKPWTAWKA PPPTWTAWKAT
8	A1X158	93	PKPWTAWKAPPTWTAWKATP
9	A1X158	105	TWTAWKATPKPWTAWKAPPPA
10	A1X158	113	PKPWTAWKAPPAWTAWKATL
11	A1X158	125	AWTAWKATLKPWTAWKATPKP
12	A1X158	135	PWTAWKATPKPWTAWKATPKP
13	A1X158	175	PWTAWKATPKPWTVWKATPKP
14	A1X158	185	PWTVWKATPKPWTAWKATPKP
15	A1X158	195	PWTAWKATPKPWTAWKAPPPA
16	A1X158	202	TPKPWTAWKA PPPAWSAWKAT
17	A1X158	203	PKPWTAWKAPPAWSAWKATP
18	A1X158	215	AWSAWKATPKPWTVWKATPKP
19	A1X158	255	PWTVWKATPKPWTAWKAPPPA
20	A1X158	315	AWSAWKATPKPWTAWKATPKP
21	A1X158	345	PWTAWKATPKPWTAWKVPPPA
22	A1X158	352	TPKPWTAWKVPPPAWTAWKAH
23	A1X158	353	PKPWTAWKVP PAWTAWKAHP
24	A1X158	415	AWTAWKATPKPWTAWKATPKP
25	A1X158	435	PWTVWKATPKPWTAWRATPPP
26	A6YR20	65	HNGCWCDQEA PHGNCCD TDGC
27	A6YR20	82	TDGCTAAWWC PGTKWDDWKTG
28	B2CS62	8	VRCCRVENKCPHTVCCDRSRC
29	B2KPN7	64	RDWEYHAHPK P NSFMTLVVLT
30	B4YSU8	51	CGGTGDSCNE PAGELCCRRLK
31	C3VVN6	55	REVQECQVDT PGSSWGKCCMT
32	C4PWC4	55	RDVQECQVVT PGSKWGRCCLN
33	D2Y168	57	NTCDSSNKCS PGFPGGPFGPS
34	D2Y171	50	IRQRDAADV KPVARTNEG PGR
35	D2Y171	58	VKPVARTNEG PGRDPAPCCQH

36	D2Y171	62	ARTNEGPRD P APCCQHPIET
37	D2Y171	64	TNEGPRDPA P CCQHPIETCC
38	O82337	31	LSLAGAQSLA P APAPTSDGTS
39	O82337	33	LAGAQSLAPA P APTSDGTSID
40	O82337	35	GAQSLAPAPA P TSDGTSIDQG
41	P00877	104	DNQYIAYVAY P IDLFEEGSVT
42	P00877	151	PPAYVKTFVG P PHGIQVERDK
43	P01042	383	LGMISLMKRP P GFSPFRSSRI
44	P01522	49	ELSLSTRCKS P GSSCSPTSYN
45	P01522	55	RCKSPGSSCS P TSYNCCRSCN
46	P01522	66	TSYNCCRSCN P YTKRCYGGYC
47	P01523	56	LF EKRRDCCT P PKKCKDRQCK
48	P01523	57	FEKRRDCCT P KKCKDRQCKP
49	P01523	67	PKKCKDRQCK P QRCCAGRRGA
50	P02453	1163	GLNGLPGPIG P PGPRGRTGDA
51	P02457	179	PMGPAGPRGL P GPPGAPGPQG
52	P02457	182	PAGPRGLPGP P GAPGPQGFQG
53	P02457	185	PRGLPGPPGA P GPQGFQGPFG
54	P02457	194	APGPQGFQGP P GEPGEPGASG
55	P02457	197	PQGFQGPGE P GEPGASGPMG
56	P02457	200	FQGPGE P GEPGASGPMGPRG
57	P02457	215	PMGPRGPAG P PGKNGDDGEAG
58	P02457	230	DDGEAGKPGR P GQRGPPGPQG
59	P02457	236	KPGRPGQRG P GPQGARGLPG
60	P02457	245	PPGPQGARGL P GTAGLPGMKG
61	P02457	251	ARGLPGTAGL P GMKGHRGFSG
62	P02457	269	FSGLDGAKGQ P GPAGPKGEPG
63	P02457	278	QGPAGPKGE P GSPGENGAPG
64	P02457	281	PAGPKGEPGS P GENGAPGQMG
65	P02457	287	EPGSPGENGA P GQMGPRGLPG
66	P02457	296	APGQMGRGL P GERGRPGPSG
67	P02457	302	PRGLPGERGR P GPSGPAGARG
68	P02457	317	PAGARGNDGA P GAAGPPGPTG
69	P02457	323	NDGAPGAAG P GPPTGPAGPPG
70	P02457	332	PPGPTGPAG P GFPGAAGAKG
71	P02457	335	PTGPAGPPGF P GAAAGAKGETG
72	P02457	362	SEGPQGSERGE P GPPGPAGAAG
73	P02457	365	PQGSERGE P GPAGAAGPAG
74	P02457	377	PAGAAGPAGN P GADGQPGAKG
75	P02457	383	PAGNPGADGQ P GAKGATGAPG
76	P02457	392	QPGAKGATGA P GIAGAPGFPG
77	P02457	398	ATGAPGIAGA P GFPGARGPSG
78	P02457	401	APGIAGAPGF P GARGPSGPQG
79	P02457	416	PSGPQGPGSA P GPKGNSGEPG

80	P02457	425	APGPKGNSGEPGAPGNKGD TG
81	P02457	428	PKGNSGEPGAPGNKGD TGAKG
82	P02457	440	NKGD TGAKGEPGPAGVQGP PG
83	P02457	449	EPGPAGVQGP GPAGEEGKRG
84	P02457	464	EEGKRGARGE GPAGLPGPAG
85	P02457	470	ARGE GPAGLGPAGERGAPG
86	P02457	479	LPGPAGERGA PGRGFPGADG
87	P02457	485	ERGAPGRGF PGADGIAGPKG
88	P02457	497	ADGIAGPKGP GERGSPGAVG
89	P02457	503	PKGPPGERGS PGAVGPKGSPG
90	P02457	512	SPGAVGPKGS PGEAGRPEAG
91	P02457	518	PKGSPGEAGR PGEAGLPGAKG
92	P02457	524	EAGRPEAGL PGAKGLTGSPG
93	P02457	533	LPGA KGLTGSPGSPGPDGKTG
94	P02457	536	AKGLTGSPGS PGPDGKTGPPG
95	P02457	545	SPGPDGKTGP GPAGQDGRPG
96	P02457	554	PPGPAGQDGR GPAGPPGARG
97	P02457	560	QDGRPGPAGP GARGQAGVMG
98	P02457	572	ARGQAGVMGF PGPKGAAGEPG
99	P02457	581	FPGPKGAAGE PGKPGERGAPG
100	P02457	584	PKGAAGEPGK PGERGAPGPPG
101	P02457	590	EPGKPGERGA GPPGAVGAAG
102	P02457	593	KPGERGAPGP GAVGAAGKDG
103	P02457	611	KDGEAGAQGP PGPTGPAGERG
104	P02457	629	ERGEQGPAGA PGFQGLPGPAG
105	P02457	635	PAGAPGFQGL GPAGPPGEAG
106	P02457	641	FQGLPGPAGP PGEAGKPGEQG
107	P02457	647	PAGPPGEAGK PGEQGVPGNAG
108	P02457	653	EAGKPGEQGV PGNAGAPGPAG
109	P02457	659	EQGVPGNAGA GPAGARGERG
110	P02457	671	PAGARGERGF PGERGVQGP PG
111	P02457	680	FPGERGVQGP GPPQGPRGANG
112	P02457	692	PQGPRGANGA PGNDGAKGDAG
113	P02457	704	NDGAKGDAGA PGAPGNEGPPG
114	P02457	707	AKGDAGAPGA PGNEGPPGLEG
115	P02457	713	APGAPGNEGPGLEGM PGERGAAGLPG
116	P02457	719	NEGPPGLEGM PGERGAAGLPG
117	P02457	728	MPGERGAAGL PGAKGDRGDPG
118	P02457	737	LPGA KGDRGDGPKGADGAPG
119	P02457	746	DPGPKGADGA PGKDGLRGLTG
120	P02457	761	LRGLTGPIGP GPAGAPGDKG
121	P02457	767	PIGPPGPAGA PGDKGEAGPPG
122	P02457	776	APGDKGEAGP GPAGPTGARG
123	P02457	788	PAGPTGARGA PGDRGEPGPPG

124	P02457	794	ARGAPGDRGE P GPFGPAGFAG
125	P02457	797	APGDRGEPGP P GPAGFAGPPG
126	P02457	806	PPGPAGFAGP P GADGQPGAKG
127	P02457	812	FAGPPGADGQ P GAKGETGDAG
128	P02457	830	DAGAKGDAGP P GPAGPTGAPG
129	P02457	839	PPGPAGPTGA P GPAGVGAPGP
130	P02457	911	GPAGRPGE P GPAGPPGPPGPK
131	P02457	917	GEPPGPAGPP P GPGEKGSFGAD
132	P02457	965	GERGFPGL P GPSEPGKQGPS
133	P02457	986	GASGERGPP P GMGPPGLAGPP
134	P02457	1067	GPAGPAGPP P PAGARGPAGPQ
135	P02457	1109	GFSGLQGP P GPAGGEQGPS
136	P02457	1148	GKDGLNGL P GPIGPPGPRGRT
137	P02457	1154	GLPGPIGP P GPGRGTGEVGPV
138	P02457	1169	GEVGPVGPP P GPAGPPGPPGP
139	P02457	1172	GPVGPPGPP P GPAGPPGPPSGG
140	P02457	1175	GPPGPPGPP P GPAGPPGPPGDL
141	P02457	1178	GPPGPPGPP P PSGGFDLSFL
142	P02467	442	GFPGADGRV G PIGPAGNRGEP
143	P02745	39	PDGKKGEAGR P GRRRGRPGLKG
144	P02745	45	EAGRPGRRR R PGLKGEQGEFG
145	P02745	54	RPGLKGEQGE P GAPGIRTGIQ
146	P02745	57	LKGEQGE P GAPGIRTGIQGLK
147	P02745	73	IQGLKGDQGE P GPSGNPGKVG
148	P02745	79	DQGEPPSGN P GVGVPGPSG
149	P02745	85	PSGNPGKV G PGPSGPLGARG
150	P02747	36	GQANTGCY G IPGMPLPGAPG
151	P02747	39	NTGCYGI P GMPLPGAPGKDG
152	P02747	42	CYGI P GMPLPGAPGKDGYPG
153	P02747	45	IPGMPLPG A PGKDGYPGLPG
154	P02747	54	APGKDGYPGL P GPKEPGIPA
155	P02747	63	LPGPKEPG I PAIPGIRGPKG
156	P02747	81	PKGQKEPG L PGHPGKNGPMG
157	P02747	93	HPGKNGPM G PGMPGVPGPMG
158	P02747	96	KNGPMGP P MGVPGPMGIPG
159	P02747	99	PMGPMPGV P GPMPGIPGEPG
160	P02747	105	MPGVPGMP G IPGEPGEEGRYK
161	P02820	60	RRYLDHWL G APYDPDPLEPK
162	P02821	9	LYYLAPGL G APYDPDPLEPK
163	P05482	6	TCCDRDCCT P PKCKCKDRRCK
164	P05482	7	CCDRDCCT P PKCKCKDRRCKP
165	P05482	17	PKCKCKDRR C PLKCCAACCKL
166	P05483	4	PTGPSKCK S PGTPCSRGMRD
167	P05483	7	PSKCKSPG T PCSRGMRDCT

168	P05539	602	GPSGFQGLPG P PGPPGEGGKQ
169	P05539	839	GFPGAAGRVG P PGSNGNPGPA
170	P05539	1076	GFTGLQGLPG P PGPSGDQGTS
171	P05539	1118	GSNGIPGPIG P PGPRGRSGET
172	P05539	1133	GRSGETGPAG P PGNPGPPGPP
173	P05539	1139	GPAGPPGNPG P PGPPGPPGPG
174	P05539	1145	GNPGPPGPPG P PGPGIDMSAF
175	P05997	919	GFPGSAGRVG P PGPAGAPGPA
176	P05997	1156	GFTGLQGLPG P PGPNGEQGSA
177	P05997	290	FAGSPGARGF P GAPGLPGLKG
178	P05997	293	SPGARGFPGA P GLPGLKGHRG
179	P05997	296	ARGFPGAPGL P GLKGHRGHKG
180	P05997	611	PPGSIGIRGQ P GSMGLPGPKG
181	P05997	617	IRGQPGSMGL P GPKGSSGDPG
182	P07550	382	KENKLLCEDL P GTEDFVGHQG
183	P07550	395	EDFVGHQGT V PSDNIDSQGRN
184	P08252	67	GNCQSQC P GGPTPTPTPTPPGG
185	P08252	69	CQSQC P GGPTPTPTPTPPGGGD
186	P08252	71	SQC P GGPTPTPTPTPTPPGGDLG
187	P08252	72	QC P GGPTPTPTPTPTPPGGDLGS
188	P08252	74	PGGPTPTPT P PPGGDLGSI I
189	P08252	75	GGPTPTPT P PPGGDLGSI I S
190	P08427	30	CNVTDVCAGS P GIPGAPGNHG
191	P08427	33	TDVCAGSPGI P GAPGNHGLPG
192	P08427	36	CAGSPGIPGA P GNHGLPGRDG
193	P08427	42	IPGAPGNHGL P GRDGRDGVKG
194	P08427	54	RDGRDGVKG D PGPPGPMGPPG
195	P08427	57	RDGVKGDPGP P GPMGPPGGMP
196	P08427	63	DPGPPGPMGP P GGMPGLPGRD
197	P08427	67	PGPMGPPGG M PGLPGRDGLPG
198	P08427	70	MGPPGGMPGL P GRDGLPGAPG
199	P08427	76	MPGLPGRDGL P GAPGAPGERG
200	P08661	43	ACSSPGLNGF P GKDGHGDAKG
201	P08661	58	HDGAKGEKGE P GQGLRGLQGP
202	P08661	69	GQGLRGLQGP P GKVGPA GPPG
203	P08661	78	PPGKVGPA P GNPGSKGATG
204	P08661	81	KVGPA GPPGN P GSKGATGPKG
205	P0C1N1	64	CRLSCGLGCH P CCGGCCPHCG
206	P0C1N5	55	PMFDAVRDCC P LPACPFGCNP
207	P0C1N5	65	PLPACPFGCN P CCGGCCPNCG
208	P0C1W5	55	RDVQDCQVST P GSKWGRCCLN
209	P0C1W5	70	GRCCLNRVCG P MCCPASHCYC
210	P0C1W5	74	LNRVCGPMCC P ASHCYCVYHR
211	P0C1W6	59	SECIINTRDS P WGRCCRTRMC

212	P0C1W6	75	RTRMCGSMCC P RNGCTCVYHW
213	P0C1W6	94	HWRRGHGRSC P GGPCSRGHGR
214	P0C1W8	5	NPVGCCCCGV P NAACPPVCVN
215	P0C1W8	11	CCGVFNAA C P P CVCNKTCGGC
216	P0C1X1	40	GRNAVVERA P ELVVTATTNC
217	P0C1X1	55	TATTNCCGYN P MTICPPCMCT
218	P0C1X1	60	CCGYNPMTIC P PCMCTYSCPP
219	P0C1X1	61	CGYNPMTIC P PCMCTYSCPPK
220	P0C1X1	69	CPPCMCTYSC P PKRKPGRRND
221	P0C1X1	70	PPCMCTYSC P PKRKPGRRNDD
222	P0C1X1	74	CTYSCPPKR K PGRRNDDNRRG
223	P0C2W2	6	AGTAGGATGA P GIAGAPGFPG
224	P0C2W2	12	ATGAPGIAGA P GFPGARGAPG
225	P0C2W2	15	APGIAGAPGF P GARGAPGPQG
226	P0C2W2	30	APGPQG P SGA P GPKWQSR LHK
227	P0C2W2	294	MTPALGVQGP P GPQGPRLIYT
228	P0C2W2	474	RYYLPGSAG P PGATGFPGAAG
229	P0C2W2	480	SAGPPGATGF P GAAGRSQMFW
230	P0C2W2	567	ISYMAGVVGL P GQRRQGPLGV
231	P0C2W8	128	DAGPAGPKGE P GSPGENGAPG
232	P0C2W8	173	NDGATGAAG P GP T GPAGPPG
233	P0C2W8	182	PPGP T GPAG P GFPGAVGAKG
234	P0C2W8	185	PTGPAGPPGF P GA V GAKGEAG
235	P0C2W8	212	SEGPQGV R GE P GPPGPAGAAG
236	P0C2W8	215	PQGV R GE P GP P GAGAAGPAG
237	P0C2W8	242	QPGAKGANGA P GIAGAPGFPG
238	P0C2W8	248	ANGAPGIAGA P GFPGARGPAG
239	P0C2W8	251	APGIAGAPGF P GARGPAGPQG
240	P0C2W8	266	PAGPQG P SGA P GPKGNSGEPG
241	P0C2W8	290	SKGDAGAKGE P GPIGIQGP P G
242	P0C2W8	292	GDAGAKGE P G I GIQGP P GPA
243	P0C2W8	299	EPGP I GIQGP P G P AGEEGKRG
244	P0C2W8	314	EEGKRGARGE P GPTGLPGPPG
245	P0C2W8	320	ARGE P GPTGL P GPPGERGGPG
246	P0C2W8	323	EPGP T GLPG P GERGGPGSRG
247	P0C2W8	335	ERGGPGSRGF P GADGVAGPKG
248	P0C2W8	362	SPGPAGPKGS P GEAGRPGEAG
249	P0C2W8	530	FPGERGVQGP P GPAGPRGSNG
250	P0C2W8	611	PRGLTGPIGP P GPAGAPGDKG
251	P0C2W8	617	PIGP P GPAGA P GDKGEAGPSG
252	P0C2W8	710	AKGARG S AG P GATGFPGAAG
253	P0C2W8	716	SAGPPGATGF P GAAGRVGPPG
254	P0C2W8	758	PRGETGPAG R PGEVGP P GP P G
255	P0C2W8	764	PAGR P GEVGP P GPPGPAGEKG

256	P0C2W8	767	RPGEVGPPGP P GPAGEKGSFG
257	P0C2W8	812	LPGQRGGERGF P GLPGPSGEPG
258	P0C2W8	815	QRGERGF P GLPGPSGEPGKQG
259	P0C2W8	863	REGAPGAEGS P GRDGSPGPKG
260	P0C2W8	869	AEGSPGRDGS P GPKGDRGETG
261	P0C2W8	887	ETGPSGPPGA P GAPGAPGPVG
262	P0C2W8	890	PSGPPGAPGA P GAPGPVGPAG
263	P0C2W8	959	HRGFSGLQGP P GPPGSPGEQG
264	P0C2W8	962	FSGLQGP P PG P GSPGEQGPSG
265	P0C2W8	965	LQGPPGPPGS P GEQGPSGASG
266	P0C2W8	998	APGKDGLNGL P GPPGPPGPRG
267	P0C2W8	1001	KDGLNGLPGP P GPPGPRGRTG
268	P0C2W8	1004	LNGLPGPPGP P GPRGRTGDAG
269	P0C349	8	GHRRHGCCCK G PKGCSSRECRP
270	P0C349	18	PKGCSSRECR P QHCCCCHQPR
271	P0C351	3	NWCCGPSQQS P GCCWNPACVK
272	P0C424	13	APSACRLGCR P CCRRCCPRCG
273	P0C8S5	10	TTYGIYDAKP P FSCAGLRGGC
274	P0C8S5	24	AGLRGGCVLP P NLRPKFKEEK
275	P0C8S5	28	GGCVLPNLR P KFKEEKFKPR
276	P0C8V5	57	KLNKRDECFS P GTFCGIKPGL
277	P0C8V5	65	FSPGTFCGIK P GLCCSAWCYS
278	P0C8V6	57	KLNKRDECYP P GTFCGIKPGL
279	P0C8V6	65	YPPGTFCGIK P GLCCSERCFF
280	P0C8V9	55	DCIEAGNYCG P TMKICCGFC
281	P0C8V9	67	VMKICCGFCS P FSKICMNPQ
282	P0C8W0	53	LRRLEKRGCD P TDGCQTTVCE
283	P0C8W0	68	QTTVCETDTG P CCCKPNFTCQ
284	P0C8W0	93	GTKSCSCSGQ P SDCPVVPADS
285	P0C8W0	97	CSCSGQPSDC P VVPCDSPQGS
286	P0CE29	56	DNEAECQINT P GSSWGKCCMT
287	P0CE30	56	DNEAECQINT P GSSWGKCCLT
288	P0CG45	2	KPPTCCPPLL P PCCTPPKKHC
289	P0CG45	3	PPTCCPPLL P PCCTPPKKHCP
290	P0CG45	7	CPPLLPPCCT P PKKHCPAPAC
291	P0CG45	8	PPLLPPCCT P PKKHCPAPACK
292	P0CG45	13	PCCTPPKKHC P APACKYKPCC
293	P0CG45	15	CTPPKKHCPA P ACKYKPCKS
294	P0CG45	21	HCPAPACKYK P CKSSKCCPK
295	P0CH13	4	EGGPICDDCI P GGENDVFRP
296	P0CH13	14	PGGENCDVFR P YRCCSGYCIL
297	P0CH16	8	VREERVCCGY P MSCKSRACKP
298	P0CH16	18	PMSCKSRACK P SYCCCCYSPK
299	P0CH18	6	IFSGFFGSFI P CAHKGEPCTI

300	P0CH18	13	SFIPCAHKGE P CTICCRPLRC
301	P0CH18	20	KGEPCTICCR P LRCHEEKTPT
302	P0CH18	29	RPLRCHEEKT P TCVVCTPTKE
303	P0CH20	5	TPFNGYYGNF P TCSETGEDCS
304	P12108	158	PPGPPGKPG P GHIQGVESGA
305	P12108	178	ADFLCPTNCP P GPKGPQGLQG
306	P12111	2100	QRGVKGSRGF P GEEKGEVGEIG
307	P12111	2206	KNGGFRRGP P GAKNKGKGGPG
308	P12111	2239	AQGPAGPAG P GLIGEQQISG
309	P12111	2316	RRGKKGERGF P GYPGPKGNPG
310	P12111	2319	KKGERGFPGY P GPKGNPGEPG
311	P14618	403	QLFEELRRLA P ITSDPTEATA
312	P14618	408	LRRLAPITSD P TEATAVGAVE
313	P15472	10	AACSGRGSRC P PQCCMGLRCG
314	P15472	11	ACSGRGSRC P PQCCMGLRCGR
315	P15502	116	AKAGAGLGGV P GVGGLGVSAG
316	P15502	190	PGVGGAFA P GVGPFGGPQP
317	P15502	283	VLPVGAGAGV P GVPGAIPGIG
318	P15502	286	GVGGAGVPGV P GAIPGIGGIA
319	P15502	327	GAAAGLVP P GGPFGPGVVGV
320	P15502	342	GVVGVPAGV P GVGVPAGVIP
321	P15502	347	PGAGVPGVG P GAGIPVVPGA
322	P15502	360	GIPVVPAG P GAAPGVVSP
323	P15502	415	PGFGVGVG P GGIPGVAGVPGVG
324	P15502	427	VAGVPGVGGV P GVGGVPGVGI
325	P15502	481	VPGVPGTGGV P GVGTPAAAAA
326	P15502	580	RAAAGLGAG P GLGVGVGVPG
327	P15502	589	IPGLGVGV P GLGVGAGVPG
328	P15502	598	VPGLGVGAGV P GLGVGAGVPG
329	P15502	607	VPGLGVGAGV P GFGAGADEGV
330	P15502	677	GLGALGGV P GGVVGAGPAA
331	P15502	34	SRPGGVPGA P GGVPGGVFY
332	P15502	65	ALGPGGKPL P VPGLAGAGL
333	P15502	67	GPGGKPLKP P GGLAGAGLGA
334	P15502	88	GLGAFAVTF P GALVPGGVAD
335	P15502	156	LPGVYPGGV P LPGARFPGVVL
336	P15502	167	GARFPGVGV P LVPTGAGVKP
337	P15502	170	FPGVGVLP P GTGAGVKPKAP
338	P15502	177	PGVPTGAGV P KAPGVGGAFA
339	P15502	290	AGVPGVPGA P GIGGIAGVGT
340	P15502	352	PGVGVPAG P IVVPGAGIPGA
341	P15502	355	GVPGAGIPV P GAGIPGAAPV
342	P15502	421	VGGIPGVAGV P GVGGVPGVGG
343	P15502	465	AGAGVLGGLV P GPQAAPGV

344	P15502	467	AGVLGGLVPG P QAAVPGVPGT
345	P15502	522	VGVA PGVGVA P GVGLAPGVGV
346	P15502	550	PGVGVA PGIG P GGVAAAAKSA
347	P15502	646	LPSTPSSPRV P GALAAAKAAK
348	P15502	769	VAARPGFGLS P IFPGGACL GK
349	P15502	772	RPGFGLSPIF P GGACL GKACG
350	P19999	43	IACGRDGRDG P KGEKGE PGQG
351	P19999	61	GQGLRGLQGP P GKLGPPG SVG
352	P19999	67	LQGPPGKLG P GSVGAPGSQG
353	P19999	73	KLGP PGSVGA P GSQGP KGQKG
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355	P23805	78	SPGPAGRAGR P GWVGPIGPKG
356	P23805	96	PKGDNGFVGE P GPKGDTGPRG
357	P23805	108	PKGDTGPRGP P GMPPAGREG
358	P23805	111	DTGPRGPPGM P GPAGREGPSG
359	P23805	129	PSGKQGSMP P GTPGPKGETG
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364	P23805	195	PQGPSGARG P GLKGDRGDPG
365	P24091	67	GNCQSQC PG P TPPGGGDLGS
366	P24091	69	CQSQC PGGP P PGGGDLGSII
367	P28880	55	STTRCRSSGS P CGVTSICCGR
368	P29602	115	VVAANATVSM P PPSSSPSSV
369	P29602	116	VAANATVSM P PPSSSPSSVM
370	P29602	117	AANATVSM P PPSSSPSSVMP
371	P29602	121	TVSMPPSSS P SSVMPPPVMP
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373	P29602	127	PSSSPSSVM P PPVMPPPSPS
374	P29602	128	SSSPSSVMP P PVMPPPS PSS
375	P29602	129	SSPPSSVM P PVMPPPSPSSP
376	P29602	133	SSVMPPVMP P PSPSSSPPPP
377	P29602	134	SVMPPPVMP P SPSSSPPPPM
378	P29602	136	MPPPVMP P SSPSPPPMVP
379	P30754	21	QVGPIGPRGP P GP PGSPGQQG
380	P30754	24	PIGPRGPPGP P GS PGQGYQG
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382	P30754	39	QQGYQGLRGE P GD SGPMGPIG
383	P30754	54	PMGPIGKRGP P GPAGIAGKSG
384	P30754	72	KSGDDGRDGE P GPRGGIGPMG
385	P30754	90	PMGPRGAGGM P GM PGPKGHRG
386	P30754	93	PRGAGGM P GM PGPKGHRGFRG
387	P30754	123	KSGNQPDGG P GPAGPSGPIG

388	P30754	128	GPDGGPGPAG P SGPIGPRGQT
389	P30754	150	ERGRDGKSG L PGLRGVDGLAG
390	P30754	162	LRGVDGLAG P PGPPGPIGSTG
391	P30754	164	GVDGLAGPP G PPGPIGSTGSP
392	P30754	174	PPGPIGSTG S PGFPGTPGSKG
393	P30754	177	PIGSTGSP G PGTPGSKGDRG
394	P30754	180	STGSPGFPG T PGSKGDRGQSG
395	P30754	207	LQGPVGLSG Q PGVAGENGHPG
396	P30754	216	QPGVAGENG H PGMPGMDGANG
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405	P30754	285	APGVKGSS G PGDVGAPGHAG
406	P30754	291	SSGPPGDVG A PGHAGEAGKRG
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408	P30754	306	EAGKRGS P GPAGSPGPQG
409	P30754	312	SPGSPG P AGSPGPQGDRGLPG
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411	P30754	327	DRGLPGSR L PGMTGASGAMG
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413	P30754	348	IPGEKGPS G PGAKGPTGDTG
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415	P30754	372	NQGT P GIAGLPGNPGSDGRPG
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418	P30754	387	SDGRPGK D GRPGIRGKDQKG
419	P30754	417	LAGLQGRAG P PGARGEPPGKNG
420	P30754	423	RAGPPG A RGEPPGKNGAPGEPG
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430	P30754	525	DRGNVGPR G MPGERGATGPAG
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467	P30754	990	SQGPPGKDGQ PGPSGRVGP RG
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478	P30754	773	GTKGERGEDG P PGVSGPTGAP
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484	P39056	9	LQQLINGQGA P APYPDPLEPK
485	P50982	46	DLIALTARRD P CCYHPTCNMS
486	P52285	143	KIFNIKNDFT P EEEEQIRKEN
487	P55963	7	GCCGGCCGSY P NAAACHPCSK
488	P55963	13	CGSYPNAACH P CSCKDRPSYC
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563	P84946	3	RLLRWPPKK P WRLLRWPPKK

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627	Q02388	2673	EPGVPGQSGA P GKEGLIGPKG
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704	Q25460	519	LTYKPTYKPKPSYPPSYKPKT
705	Q25460	523	PTYKPKPSYPPSYKPKTTYPP
706	Q25460	543	PTYKPKISYPPTYKAKPSYPA
707	Q25460	549	ISYPPTYKAKPSYPPTYKAKP
708	Q25460	559	PSYPPTYKAKPSYPPPTYKAKP
709	Q25460	563	ATYKAKPSYPPTYKAKPSYPP
710	Q25460	583	PTYKAKPSYPPTYKAKPSYKA
711	Q25460	595	YKAKPSYKAKPTYPSTYKAKP
712	Q25460	629	PTYKAKPSYPPTYKAKPTYPS
713	Q25460	635	PSYPPPTYKAKPTYPSTYKAKP
714	Q25460	645	PTYPSTYKAKPSYPPPTYKPKI
715	Q25460	649	STYKAKPSYPPTYKPKISYPP
716	Q25460	659	PTYKPKISYPPTYKAKPSYPP
717	Q25460	665	ISYPPTYKAKPSYPPPTYKAKP
718	Q25460	701	PTNPSTYKAKPSYPPPTYKAKP
719	Q25460	753	YKAKPTYKAKPTYPPTYKAKP
720	Q25460	757	PTYKAKPTYPPTYKAKPSYPP
721	Q25460	763	PTYPPTYKAKPSYPPPTYKPKP
722	Q25460	767	PTYKAKPSYPPTYKPKPSYPP
723	Q25460	773	PSYPPPTYKPKPSYPPPTYKSKS
724	Q25460	777	PTYKPKPSYPPTYKSKSIYPS
725	Q25460	813	LTYPPTYKPKPSYPPSYKPKI
726	Q25460	817	PTYKPKPSYPPSYKPKITYPS
727	Q25460	833	ITYPSTYKPKPSYPPPTYKSKT
728	Q25460	837	STYKPKPSYPPTYKSKTSYPP
729	Q25460	867	SSYKAKTSYPPAYKPTNRYR
730	Q2I2Q5	58	LHAPRDECCEPQWCDGACDCC
731	Q3Y5Z3	39	GACAGWMAGIPGHFGHNGTPG
732	Q3Y5Z3	42	AGWMAGIPGHFGHNGTPGRDG
733	Q3Y5Z3	48	IPGHFGHNGTPGRDGRDGTGP
734	Q3Y5Z3	86	GETGITGIEGPRGFPGTPGRK
735	Q4ZJN1	31	DTCRQGHSGIPGNPGHNGLPG
736	Q4ZJN1	34	RQGHSGIPGNPGHNGLPGRDG
737	Q4ZJN1	40	IPGNPGHNGLPGRDGRDGAKG
738	Q4ZJN1	58	AKGDKGDAGEPGHPGGPGKDG
739	Q4ZJN1	61	DKGDAGEPGHPGGPGKDGIRG

740	Q4ZJN1	64	DAGEPGHPGG P GKDGIRGEKG
741	Q4ZJN1	76	KDGIRGEKGE P GADGRVEAKG
742	Q4ZJN1	115	SIGPTGEQGL P GETGPQGQKG
743	Q4ZJN1	151	STGPLGPKGL P GPMGPIGKPG
744	Q4ZJN1	160	LPGPMGPIGK P GPRGEAGPMG
745	Q4ZJN1	175	EAGPMGPQGE P GVRGMRGWKG
746	Q60994	47	GTCAGWMAGI P GHFGHNGTPG
747	Q60994	94	GDVGMTGAEG P RGFPGTTPGRK
748	Q6PSU2	67	EDSYGRDPYS P SQDPYSPSQD
749	Q6PSU2	74	PYSPSQDPYS P SQDPDRRDPY
750	Q6PSU2	86	QDPDRRDPYS P SPYDRRGAGS
751	Q7M1I4	8	YHNNHYSYSS P PPPPVVSSPP
752	Q7M1I4	9	HNNHYSYSS P PPPPVVSSPPP
753	Q7M1I4	10	NNHYSYSS P PPPPVVSSPPPP
754	Q7M1I4	11	NHYSYSS P PPPPVVSSPPPPY
755	Q7M1I4	12	HYSYSS P PPPPVVSSPPPPYY
756	Q7M1I4	17	SPPPPPVVSS P PPPPYYYYSP
757	Q7M1I4	18	PPPPPPVVSS P PPPPYYYYSP
758	Q7M1I4	19	PPPPVVSS P PPPPYYYYSP
759	Q7M1I4	20	PPPPVVSS P PPPPYYYYSP
760	Q7M1I4	26	SPPPPPYYYY P PPPPVPPPPS
761	Q7M1I4	27	PPPPPPYYYY P PPPPVPPPPSY
762	Q7M1I4	28	PPPPPPYYYY P PPPPVPPPPSY
763	Q7M1I4	29	PPPPPPYYYY P PPPPVPPPPSY
764	Q7XAD0	51	KLESGNYGRT P YKTTPPPPTSS
765	Q7XAD0	55	GNYGRTPYKT P PPPTSSSPTH
766	Q7XAD0	56	NYGRTPYKT P PTSSSPTHQ
767	Q7XAD0	57	YGRTPYKT P PTSSSPTHQE
768	Q7XAD0	58	GRTPYKT P PTSSSPTHQEI
769	Q7XAD0	63	KTPPPPTSS P THQEIIVNGRH
770	Q7XAD0	79	VNGRHDSVLP P SPKTDPIIG
771	Q7XAD0	80	NGRHDSVLP P SPKTDPIIGQ
772	Q7XAD0	82	RHDSVLP P PKTDPIIGQLT
773	Q7XAD0	119	VGGRHDYVAS P PPPKPQDEQR
774	Q7XAD0	120	GGRHDYVAS P PPPKPQDEQRQ
775	Q7XAD0	121	GRHDYVAS P PKPQDEQRQI
776	Q7XAD0	122	RHDYVAS P PKPQDEQRQII
777	Q7Z091	8	KCGGCKKDRK P CSYHADCCNC
778	Q7Z091	26	CNCCLSGICA P STNWILPGCS
779	Q7Z092	2	GNAKCFSPGG P SFCKANGKPC
780	Q7Z092	11	GPSFCKANGK P CSYHADCCNC
781	Q7Z092	29	CNCCLSGICK P STNVILPGCS
782	Q7Z094	2	EDAKCFSPGG P SFCKADEKPC
783	Q7Z094	11	GPSFCKADEK P CEYHADCCNC

784	Q7Z096	38	SRAARVKNRGPSFCKADEKPC
785	Q7Z096	47	GPSFCKADEKPCKYHADCCNC
786	Q7Z096	65	CNCCLGGICKPSTSWIGCSTN
787	Q800F1	54	EKKREAPERPPGFTPFRIYYI
788	Q8LG54	24	LFTTSCLAQAAPSPSTTTVTP
789	Q8LG54	26	TTSCLAQAPAPSPSTTTVTPPP
790	Q8LG54	28	SCLAQAPAPSPSTTTVTPPPVA
791	Q8LG54	35	APSPSTTTVTPPPVATPPPAAT
792	Q8LG54	36	PSPTTTVTPPPVATPPPAATP
793	Q93WP7	42	SGYGRGTNLPPSPASSPPSK
794	Q93WP7	43	GYGRGTNLPPSPASSPPSKE
795	Q93WP7	45	GRGTNLPPSPASSPPSKEVS
796	Q93WP7	49	NLPPSPASSPPSKEVSNSVS
797	Q93WP7	50	LPPSPASSPPSKEVSNSVSP
798	Q93WP7	149	EKYWNRKPLSPSPKPADGHR
799	Q93WP7	150	KYWNRKPLSPSPKPADGHRP
800	Q93WP7	152	WNRKPLSPSPKPADGHRPLQ
801	Q93WP8	42	SGYGRGANLPPSPASSPPSK
802	Q93WP8	43	GYGRGANLPPSPASSPPSKE
803	Q93WP8	45	GRGANLPPSPASSPPSKEVS
804	Q93WP8	150	ERYWNRKPLSPSPKPADGQR
805	Q93WP8	151	RYWNRKPLSPSPKPADGQRP
806	Q93WP8	153	WNRKPLSPSPKPADGQRPLH
807	Q941C7	63	SANPKHDPGVPPSATGQRVVG
808	Q941C7	64	ANPKHDPGVPPSATGQRVVGR
809	Q9BPB1	58	CSDDWQYCESPTDCCSWDCDV
810	Q9BPB2	49	DAEKQQKRLCPDYTDPCSHAH
811	Q9BPB2	54	QKRLCPDYTDPCSHAHECCSW
812	Q9BPJ7	65	NAGFCRFGCTPCCYYCCPTCG
813	Q9C5S0	23	VLIAGVTGQAPTSPTATPAP
814	Q9C5S0	26	AGVTGQAPTSPTATPAPPTP
815	Q9C5S0	27	GVTGQAPTSPTATPAPPTPT
816	Q9C5S0	31	QAPTSPTATPAPPTPTTPPP
817	Q9C5S0	33	PTSPPTATPAPPTPTTPPPAA
818	Q9LJD9	32	VGNVAAQTEAPAPSPSTSDAAM
819	Q9LJD9	34	NVAAQTEAPAPSPSTSDAAMFV
820	Q9LJD9	36	AAQTEAPAPSPSTSDAAMFVPA
821	Q9LVC0	32	VHQTVAAVDAAPSPSTSDASS
822	Q9LVC0	34	QTVAAVDAPAPSPSTSDASSFI
823	Q9LVC0	36	VAAVDAPAPSPSTSDASSFIPT
824	Q9LYF6	27	SVVASAQSEAPAPSPSTSGSSA
825	Q9LYF6	29	VASAQSEAPAPSPSTSGSSAIS
826	Q9LYF6	31	SAQSEAPAPSPSTSGSSAISAS
827	Q9M0S4	24	LIASSAIAQAPGPAPTRSPLP

828	Q9M0S4	26	ASSAIAQAPG P APTRSPLPSP
829	Q9M0S4	28	SAIAQAPGPA P TRSPLPSPAQ
830	Q9M0S4	32	QAPGPAPTRS P LPSPAQPPRT
831	Q9M0S4	36	PAPTRSPLPS P AQPPRTAAPT
832	Q9SJY7	24	FLATSCLAQA P APAPTTVTPP
833	Q9SJY7	26	ATSCLAQAPA P APTTVTPPPT
834	Q9SJY7	28	SCLAQAPAPA P TTVTPPPTAL
835	Q9SJY7	34	PAPAPTTVTP P PTALPPVTAE
836	Q9SJY7	35	APAPTTVTP P PTALPPVTAET
837	Q9STQ3	31	AVQQAAAVEA P APSPTSDASL
838	Q9STQ3	33	QQAAAVEAPA P SPTSDASLAI
839	Q9STQ3	35	AAAVEAPAPS P TSASLAI PA
840	Q9U3Z3	53	NECCWGGCGH P CRHPGKRSKL
841	Q9UKV8	700	ACIKLEKDYQ P GITFIVVQKR
842	Q9Y2N7	492	ADALDLEMLA P YISMDDDFQL
843	Q9ZT16	24	LFATSALAQA P APTPTATPPP
844	Q9ZT16	26	ATSALAQAPA P TPTATPPPAT
845	Q9ZT16	28	SALAQAPAPT P TATPPPATPP
846	Q9ZT16	32	QAPAPTPTAT P PPATPPPVAT
847	Q9ZT16	33	APAPTPTAT P PPATPPPVATP
848	Q9ZT16	34	PAPTPTAT P PPATPPPVATPP
849	Q9ZT16	37	TPTATPPPAT P PPVATPPPVAT
850	Q9ZT16	38	PTATPPPAT P PPVATPPPVAT
851	Q9ZT16	39	TATPPPAT P PPVATPPPVATP

(2)List of the 3505 peptide samples in the negative subset

Sample #	Protein ID	Site	Sequences
1	A1X158	24	LIGSASAVYH P PSWTAWIAPK
2	A1X158	25	IGSASAVYHP P SWTAWIAPKP
3	A1X158	33	HPPSWTAWIA P KPWTAWKVHP
4	A1X158	35	PSWTAWIAPK P WTAWKVHPPA
5	A1X158	44	KPWTAWKVHP P AWTAWKAHPP
6	A1X158	54	PAWTAWKAHP P AWTAWKATPK
7	A1X158	63	PPAWTAWKAT P KPWTAWKAPP
8	A1X158	74	KPWTAWKAPP P AWTAWKATPK
9	A1X158	94	KPWTAWKAPP P TWTAWKATPK
10	A1X158	103	PPTWTAWKAT P KPWTAWKAPP
11	A1X158	114	KPWTAWKAPP P AWTAWKATLK
12	A1X158	133	LKPWTAWKAT P KPWTAWKATP
13	A1X158	143	PKPWTAWKAT P KPWTAWKATP
14	A1X158	173	PKPWTAWKAT P KPWTVWKATP
15	A1X158	183	PKPWTVWKAT P KPWTAWKATP
16	A1X158	193	PKPWTAWKAT P KPWTAWKAPP

17	A1X158	204	KPWTAWKAPP P AWSAWKATPK
18	A1X158	213	PPAWSAWKAT P KPWTVWKATP
19	A1X158	253	PKPWTVWKAT P KPWTAWKAPP
20	A1X158	313	PPAWSAWKAT P KPWTAWKATP
21	A1X158	343	PKPWTAWKAT P KPWTAWKVPP
22	A1X158	354	KPWTAWKVPP P AWTAWKAHPP
23	A1X158	413	PPAWTAWKAT P KPWTAWKATP
24	A1X158	433	PKPWTVWKAT P KPWTAWRATP
25	A1X158	443	PKPWTAWRAT P PPTWTAWHGH
26	A1X158	444	KPWTAWRAT P PPTWTAWHGHG
27	A1X158	445	PWTAWRAT P PPTWTAWHGHGY
28	A1X158	461	HGHGYGGYGK P GKPGKPGSKG
29	A1X158	464	GYGGYGKPGK P GKPGSKGPRG
30	A1X158	467	GYGKPGKPGK P GSKGPRGPAG
31	A1X158	472	GKPGKPGSKG P RGPAAGPPGAT
32	A1X158	475	GKPGSKGPRG P AGPPGATGKT
33	A1X158	478	GSKGPRGPAG P PGATGKTGRT
34	A1X158	479	SKGPRGPAG P PGATGKTGRTG
35	A1X158	496	GRTGATGKR P PGYPGKPGVP
36	A1X158	497	RTGATGKR P PGYPGKPGVPG
37	A1X158	500	ATGKRGP P PGYPGKPGVPRNG
38	A1X158	503	KRGPPGY P PGKPGVPRNGYVH
39	A1X158	506	PPGYPGK P PGVPRNGYVHIVF
40	A1X158	557	HGHGWTAWT P PAYGGYAPPA
41	A1X158	558	GHGWTAWT P PAYGGYAPPAT
42	A6YR20	15	CVLVVLLLL P YGD LITNNYI
43	A6YR20	34	YIRGAARKV T PWRRNLKTRDV
44	B2CS62	27	RCCKLIR T PLMYHVCVCCV
45	B2KPN7	17	VLLCIFLV L FPMATLQLDGDQ
46	B2KPN7	62	KKRDWEYHAH P KPNSFWTLVV
47	B4YSU8	16	VLLLALL L LLPLSTAQDAEGS
48	B4YSU8	69	RLKCVNSR C CTTDGCCGDTT
49	C3VVN6	2	LLVVALK P MMKLAVVLLVLL
50	C3VVN6	15	AVVLLVLL L PLSYFDAAGGQ
51	C3VVN6	93	HWRRGHGC S CPGGPCSCGHGR
52	C4PWC4	2	LLMMELK P MMKLMMMLLVLL
53	C4PWC4	15	EMMLLVLL L PLSSFSAAGEQ
54	C4PWC4	70	GRCCLN R VC G PMCCPASHCYC
55	C4PWC4	74	LN R VC G PMCC P ASHCYCIYHR
56	D2Y168	23	LTSFIET E AG P VNEAGVERLF
57	D2Y168	42	LFRALVGR G CPADCPNTCDSS
58	D2Y168	46	LVGRGCPAD C PNTCDSSNKCS
59	D2Y168	60	DSSNKCS P GF P GGPFGPSCKN
60	D2Y171	69	GRDPAPCC Q H P IETCCRRRRC

61	D5KR58	28	QFTAADDMEY P KWLRGLSTDS
62	D5KR58	48	SERGCWLCLG P NACCRGSVCH
63	D5KR58	62	CRGSVCHDYC P RRPCYDHCVS
64	O82337	63	VALVLTYLIH P LDASSSYSFF
65	P00057	5	PPAFSAASF A P PGVKAGEKIF
66	P00057	6	PAFSAASF A P PGVKAGEKIFK
67	P00057	35	VEKGAGHKQ G P NLNGLFGRQS
68	P00057	76	ENTLYDYLLN P KKYIPGTKMV
69	P00057	81	DYLLNPKKYI P GTKMVFPGLK
70	P00057	88	KYIPGTKMVF P GLKKPQDRAD
71	P00057	93	TKMVF P GLKK P QDRADLIAYL
72	P00877	3	KTETQPVMMV P QTETKAGAGF
73	P00877	27	VKDYRLTYYT P DYVVRDITDIL
74	P00877	44	TDILAAFRMT P QLGVPPEECG
75	P00877	49	AFRMT P QLGV P PEECGA AVAA
76	P00877	50	FRMT P QLGV P PEECGA AVAAE
77	P00877	89	RYKGRCYDIE P VPGEDNQYIA
78	P00877	91	KGRCYDIE P VPGEDNQYIAYV
79	P00877	141	RALRLEDLRI P PAYVKTFVGP
80	P00877	142	ALRLEDLRIP P PAYVKTFVGPP
81	P00877	152	PAYVKTFVGP P HGIQVERDKL
82	P00877	176	GRGLLGCTIK P KLGLSAKNYG
83	P00877	210	TKDDENVNSQ P FMWRDRFLF
84	P00877	263	RAVCAKELGV P IIMHDYLTGG
85	P00877	372	IYFTQDWCSM P GVMPVASGGI
86	P00877	376	QDWCSMPGV M P VASGGIHVWH
87	P00877	388	ASGGIHVWHM P ALVEIFGDDA
88	P00877	410	LQFGGGTLGH P WGNAPGAAAN
89	P00877	415	GTLGHPWGN A P GAAANRVALE
90	P00877	453	DVIRSACKWS P ELAAACEVWK
91	P01042	84	FKYEIKEGDC P VQSGKTWQDC
92	P01042	130	SVATQTCQIT P AEGPVVTAQY
93	P01042	134	QTCQIT P AE G P VVTAQYDCLG
94	P01042	148	AQYDCLGCVH P ISTQSPDLEP
95	P01042	154	GCVHP I STQ S P DLEPILRHGI
96	P01042	158	PISTQSPDLE P ILRHGIQYFN
97	P01042	216	CSKENFLFLT P DCKSLWNGDT
98	P01042	252	ASFSQNCDIY P GKDFVQPPTK
99	P01042	259	DIYPGKDFV Q P PTKICVGCPR
100	P01042	260	IYPGKDFV Q P PTKICVGCPRD
101	P01042	268	QPPTKICVGC P RDIPITNSPEL
102	P01042	272	KICVGCPRDI P ITNSPELEETL
103	P01042	276	GCPRDIPTNS P ELEETLTHTI
104	P01042	359	LDCNAEVYV V P WEKKIYPTVN

105	P01042	366	YVVPWEKKIYPTVNCQPLGMI
106	P01042	372	KKIYPTVNCQPLGMISLMKRP
107	P01042	382	PLGMISLMKRPPGFSPFRSSR
108	P01042	387	SLMKRPPGFSPFRSSRIGEIK
109	P01042	404	GEIKEETTVSPHTSMAQAQD
110	P01042	405	EIKEETTVSPHTSMAQAQDE
111	P01042	411	TVSPHTSMAQAQDEERDSGK
112	P01042	534	LASSEDSTTSAQTQEKTEG
113	P01042	545	SAQTQEKTEGPTPIPSLAKPG
114	P01042	547	QTQEKTEGPTPIPSLAKPGVT
115	P01042	549	QEKTEGPTPIPSLAKPGVTVT
116	P01042	554	GPTPIPSLAKPGVTVTFSDFQ
117	P01042	574	QDSDLIATMMPPISPAPIQSD
118	P01042	575	DSDLIATMMPPISPAPIQSDD
119	P01042	578	LIATMMPPISPAPIQSDDDWI
120	P01042	580	ATMMPPISPAPIQSDDDWI
121	P01042	589	APIQSDDDWIPDIQIDPNGLS
122	P01042	595	DDWIPDIQIDPNGLSFNPISD
123	P01042	602	QIDPNGLSFNPISDFPDTTSP
124	P01042	607	GLSFNPISDFPDTTSPKCPGR
125	P01042	612	PISDFPDTTSPKCPGRPWKSV
126	P01042	615	DFPDTTSPKCPGRPWKSVSEI
127	P01042	618	DTTSPKCPGRPWKSVSEINPT
128	P01042	627	RPWKSVSEINPTTQMKEYSYF
129	P01523	16	VLLTICLLLFPLTALPMDGDE
130	P01523	21	CLLLFPLTALPMDGDEPANRP
131	P01523	27	LTALPMDGDEPANRPVERMQD
132	P01523	31	PMDGDEPANRPVERMQDNISS
133	P01523	45	MQDNISSEQYPLFEKRRDCCT
134	P02453	36	GQEEGQEEEDIPVTCVQNGLR
135	P02453	37	QEEGQEEEDIPVTCVQNGRLR
136	P02453	55	LRVHVRDVWKPVPQCICVCDN
137	P02453	57	YHVRDVWKPVPQCICVCDNGN
138	P02453	82	DVICDELKDCPNAKVPTDECC
139	P02453	87	ELKDCPNAKVPTDECCPVCPE
140	P02453	93	NAKVPTDECCPVCPEGQESPT
141	P02453	96	VPTDECCPVCPEGQESPTDQE
142	P02453	102	CPVCPEGQESPTDQETTGVG
143	P02453	113	TDQETTGVGPKGDTGPRGPR
144	P02453	119	GVEGPKGDTGPRGPRGPP
145	P02453	122	GPKGDTGPRGPRGPPGRD
146	P02453	125	GDTGPRGPRGPRGPPGRDGIP
147	P02453	128	GPRGPRGPRGPRGPPGRDGIP
148	P02453	129	PRGPRGPRGPRGPPGRDGIP

149	P02453	135	PAGPPGRDGI P GQPGLPGPPG
150	P02453	138	PPGRDGIPGQ P GGLPGPPGPPG
151	P02453	141	RDGIPGQ P GGLPGPPGPPGPPG
152	P02453	143	GIPGQ P GGLPG P PGPPGPPGPP
153	P02453	144	IPGQ P GGLPG P PGPPGPPGPPG
154	P02453	146	GQ P GGLPGPPG P PGPPGPPGLG
155	P02453	147	Q P GGLPGPPG P PGPPGPPGLGG
156	P02453	149	GLPGPPGPPG P PGPPGLGGNF
157	P02453	150	LPGPPGPPG P PGPPGLGGNF
158	P02453	152	GPPGPPGPPG P PGGLGGNFAPQ
159	P02453	153	PPGPPGPPG P PGGLGGNFAPQL
160	P02453	161	GPPGLGGNF P QLSYGYDEKS
161	P02453	177	YDEKSTGISV P PGMPGSPGRG
162	P02453	179	EKSTGISV P PGMPGSPGRGLP
163	P02453	182	TGISVPGMPG P SGPRGLPGPP
164	P02453	185	SVPGMPGSPG P RGLPGPPGAP
165	P02453	189	PMGSPGPRGL P GPPGAPGPQG
166	P02453	191	GPSGPRGLPG P PGAPGPQGFGQ
167	P02453	192	PSGPRGLPG P PGAPGPQGFGQ
168	P02453	195	PRGLPGPPG A PGPQGFGQGPPG
169	P02453	197	GLPGPPGAPG P QGFGQGPPGEP
170	P02453	203	GAPGPQGFGQ P PGEPGEFGAS
171	P02453	204	APGPQGFGQ P GEPEGEFGASG
172	P02453	207	PQGFGQPPGE P GEPEFGASGPMG
173	P02453	210	FQGPPGEPE P GEFGASGPMGPRG
174	P02453	215	GEPEGEFGASG P MGPRGPPGPP
175	P02453	218	GEFGASGPMG P RGPPGPPGKN
176	P02453	221	GASGPMGPRG P PGPPGKNDD
177	P02453	222	ASGPMGPRG P PGPPGKNDDG
178	P02453	224	GPMGPRGPPG P PGKNDDGEA
179	P02453	225	PMGPRGPPG P PGKNDDGEAG
180	P02453	237	KNDDGEAGK P GRPGERGPPG
181	P02453	240	DDGEAGKPGR P GERGPPGPQG
182	P02453	245	GKPGRPGERG P PGPQGARGLP
183	P02453	246	KPGRPGERG P PGPQGARGLP
184	P02453	248	GRPGERGPPG P QGARGLP
185	P02453	255	PPGPQGARGL P GTAGLP
186	P02453	261	ARGLPGTAGL P GPMKGHRGFSG
187	P02453	281	GLDGAKGDAG P AGPKGEFGSP
188	P02453	284	GAKGDAGPAG P KGEFGSPGEN
189	P02453	288	DAGPAGPKGE P GSPGENGAPG
190	P02453	291	PAGPKGEFGS P GENGAPGQMG
191	P02453	297	EPGSPGENGA P GQMGPRGLPG
192	P02453	302	GENGAPGQMG P RGLPGERGRP

193	P02453	306	APGQMGPRL P GERGRPGAPG
194	P02453	312	PRGLPGERGR P GAPGPAGARG
195	P02453	315	LPGERGRPGA P GPAGARGNDG
196	P02453	317	GERGRPGAPG P AGARGNDGAT
197	P02453	332	GNDGATGAAG P PGPTGPAGPP
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939	P05539	462	QDGLAGPKG P GERGPSGLAG
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1254	P05997	877	GQKGDAGSPG P QGLAGSPGPH
1255	P05997	884	SPGPQGLAGS P PGPHGPNVPG
1256	P05997	886	GPQGLAGSPG P HGPNVPG GL K
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1259	P05997	904	GLKGGRGTQ G PGATGFPGSA
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1261	P05997	911	TQGP P GATGF P GSAGRVGP P G
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1264	P05997	926	RVGP P GPAGAP P GPAGPLGE P G
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1269	P05997	941	PLGE P GKEGP P GLRGDPG SH G
1270	P05997	947	KEGP P GLRGDP P GSHGRVGD R G
1271	P05997	958	GSHGRVGD R G P AGPPGGPGD K
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1274	P05997	965	DRGPAGPPGG P GDKGD P GED G
1275	P05997	971	PPGGPGD K GD P GED G QPGD G
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1279	P05997	983	ED G Q P G P DG P GPAGTTG Q RG
1280	P05997	985	GQ P G P DG P GPAGTTG Q RGIV
1281	P05997	998	TTG Q RGIVGM P G Q RGERGM P G
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1283	P05997	1010	Q R GERGM P GL P GPAGTPGK V G
1284	P05997	1012	GERGM P GL P GPAGTPGK V GPT
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1286	P05997	1021	GPAGTPGK V GPTGATGD K GPP
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1288	P05997	1031	PTGATGD K G P PGVGP P GSNG
1289	P05997	1033	GATGD K G P PGVGP P GSNGPV
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1292	P05997	1042	GPVGP P GSNG P VGE P G P EGPA

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1306	P05997	1111	GDPGSRGPIG P PGRAGKRGLP
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1309	P05997	1123	GRAGKRGLPG P QGPRGDKGDH
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1344	P05997	1341	ETGETCISAN P SSVPRKTWWA
1345	P05997	1345	TCISAN P SSV P RKTTWASKSP
1346	P05997	1355	PRKTWWASKS P DNKPVWYGLD
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1353	P07550	14	PGNGSAFLLA P NGSHAPDHDV
1354	P07550	20	FLLAPNGSHA P DHDVTQERDE
1355	P07550	88	ADLVMGLAVV P FGAAHILMKM
1356	P07550	138	AVDRYFAITS P FKYQSLLTKN
1357	P07550	168	WIVSGLTSFL P IQMHWRATH
1358	P07550	211	IASSIVSFYV P LVIMVFVYSR
1359	P07550	288	IMGTFTLCWL P FFIVNIVHVI
1360	P07550	323	WIGYVNSGFN P LIYCRSPDFR
1361	P07550	330	GFNPLIYCRS P DFRIAFQELL
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1367	P08252	157	TGGWATA P DGPYAWGYCWLRE
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1372	P08252	194	APGRKYFGRG P IQISHNINYG
1373	P08252	205	IQISHNINYG P CGRAIGVDLL
1374	P08252	218	RAIGVDLLNN P DLVATDPVIS
1375	P08252	225	LNNPDLVATD P VISFKSALWF
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1377	P08252	242	ALWFWMT P QSPKPSCHDVIIG
1378	P08252	244	WFWMT P QSPKPSCHDVIIGRW
1379	P08252	256	CHDVIIGRW P SAGDRAANRL
1380	P08252	267	SAGDRAANRL P GGFVITNIIN

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1386	P08427	82	RDGLPGAPGAPEGGERGDKGEPG
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1391	P08427	168	AGGNIAVPRTPEENEAIASIA
1392	P08427	195	VYLGMIEDQTPGDFHYLDGAS
1393	P08427	213	GASVNYTNWYPGEPRGQGKEK
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1404	P08661	231	LLTNGKWNDRVPCSDSFLVVCE
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1406	P0C1N1	21	CLLLFPLTAVPLDGDQPADRP
1407	P0C1N1	27	LTAVPLDGDQPADRPAERMQD
1408	P0C1N1	31	PLDGDQPADRPAERMQDDISS
1409	P0C1N1	45	MQDDISSEHHPFFDPVKRCCR
1410	P0C1N1	49	ISSEHHPFFDPVKRCCRLSCG
1411	P0C1N5	21	CLLLFALTAVPLDGDQPADRP
1412	P0C1N5	45	MQDDISSERHMFDAVRDCCP
1413	P0C1N5	57	FDAVRDCCPLPACPFGCNPCC
1414	P0C1N5	60	VRDCCPLPACPFGCNPCCGGC
1415	P0C1W5	15	EMMLLVLLIFPLSYFIAAGGQ
1416	P0C1W8	10	CCCGVPNAACPPCVCNKTCGG
1417	P0C1X1	23	VVLATTVVSIPSDRASDGRNA
1418	P0C2W2	21	APGFPGARGAPGPQGPGSGAPG
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1420	P0C2W2	26	GARGAPGPQGPGSGAPGPKWQS
1421	P0C2W2	32	GPQGPGSGAPGPKWQSRLHKKQ
1422	P0C2W2	62	HMYVQWIYYYPETITHDMNWW
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1424	P0C2W2	129	HFGVFQWLSYPWDERFSINMS

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1510	P0C2W8	871	GSPGRDGSPG P KGDRGETGPS
1511	P0C2W8	880	GPKGDRGET G PSGPPGAPGAP
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1543	P0C424	4	CASPACCCCA P SACRLGCRPC
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1572	P12108	57	IDGDKGSPGAPGSPGAKGEPG
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1913	P14618	517	DVVIVLTGWR P GSFTNTMRV
1914	P14618	529	SGFTNTMRVV P VPPVPVVRMT
1915	P14618	531	FTNTMRVV P VPVPVVRMTNT
1916	P15472	24	CMGLRCGRGN P QKCIGAHEDV
1917	P15502	9	AMMAGLTAAAP R PGVLLLLLS
1918	P15502	11	MAGLTAAAP R PGVLLLLLSIL
1919	P15502	23	VLLLLLSILH P SRPGGVPGAI
1920	P15502	26	LLLLSILHPSR P GGVPGAI PGG
1921	P15502	30	ILHPSRPGGV P GAI PGGV PGG
1922	P15502	38	GVPGAI PGGV P GGVFY PGAGL
1923	P15502	44	PGGVPGGVFY P GAGLGALGGG
1924	P15502	58	LGALGGGALG P GGKPLKVPVG
1925	P15502	62	GGGALGPGGK P LKVPVPGGLAG
1926	P15502	83	AGLGAGLGAF P AVTFPGALVP
1927	P15502	93	PAVTFPGALV P GGVADAAAAY
1928	P15502	130	GLGVSAGAVV P QPGAGVKPGK
1929	P15502	132	GVSAGAVV P QPGAGVKPGKVP
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1931	P15502	142	PGAGVKPGKV P GVGLPGVYPG
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1934	P15502	161	PGGVLPGARF P GVGVLPGVPT
1935	P15502	180	PTGAGVKPKA P GVGGAFA GIP
1936	P15502	194	GAFAGIPGVG P FGGPQPGVPL
1937	P15502	198	GIPGVGPFGG P QPGVPLGYPI
1938	P15502	200	PGVGPFGGP P QGVPLGYPIKA
1939	P15502	203	GPFGGPQPGV P LGYP IKA PKL
1940	P15502	207	GPQPGVPLGY P IKAPKLPGGY
1941	P15502	211	GVPLGYPIKA P KLPGGYGLPY
1942	P15502	214	LGYP IKA PKL P GGYGLPYTTG
1943	P15502	220	APKLPGGYGL P YTTGKLPGYGY
1944	P15502	227	YGLPYTTGKL P YGYGPGGVAG
1945	P15502	232	TTGKLPGYGY P GGVAGAAGKA
1946	P15502	245	VAGAAGKAGY P TGTGVGPQAA
1947	P15502	252	AGYPTGTGVG P QAAAAAAKA
1948	P15502	275	KFGAGAAGVL P GVGGAGVPGV
1949	P15502	301	GIGGIAGVGT P AAAAAAAAAA
1950	P15502	324	AKYGAAAGLV P GGPGFGPGVV
1951	P15502	331	GLVPGGPFG P GVVGVPAGV
1952	P15502	337	PGFGPGVVGV P GAGVPGVGP

1953	P15502	365	PGAGIPGAADV P GVVSPEAAAK
1954	P15502	370	PGAADVPGVVS P EAAAKAAAKA
1955	P15502	387	AAKAAKYGAR P GVGVGGIPTY
1956	P15502	395	ARPGVGVGGI P TYGVGAGGFP
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1973	P15502	640	PSSSQHLPST P SSPRVPGALA
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1976	P15502	685	GIPGGVVGAG P AAAAAAAKAA
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1978	P15502	729	VPGVGGLGGI P PAAAAKAAKY
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1980	P15502	755	GGVLGGAGQ F PLGGVAARPGF
1981	P15502	763	QFPLGGVAAR P GFGLSPIFPG
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1983	P19999	50	RDGPKGEKGE P GQGLRGLQGP
1984	P19999	60	PGQGLRGLQ G PGKLGPPGSV
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1987	P19999	155	CSELRGTVAI P RNAEENKAIQ
1988	P19999	203	LTYSNWKKDE P NDHGSGEDCV
1989	P19999	237	QASHTAVCE F PAAPFECVATH
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1992	P23805	42	ANACTLVMCS P LESGLPGHDG
1993	P23805	48	VMCSPLESGL P GHGQDGDREC
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2002	P23805	107	GPKGDTGPRG P PGMPGPAGRE
2003	P23805	113	GPRGPPGMPG P AGREGPSGKQ
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2006	P23805	134	GSMGPPGTPG P KGETGPKGGV
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2012	P23805	188	GPSGAIGPQ P SGARGPPGLK
2013	P23805	194	GPQGPSGARG P PGLKGDRGDP
2014	P23805	204	PPGLKGDRGD P GETGAKGESG
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2016	P23805	285	CREAKGQLAS P RSSAENEAVT
2017	P23805	321	DISTEGRFTY P TGEILVYSNW
2018	P23805	336	LVYSNWADGE P NNSDEGQPEN
2019	P23805	344	GEPNNSDEG P ENCVEIFPDG
2020	P23805	352	GQPENCVEIF P DGKWNDVPCS
2021	P23805	360	IFPDGKWNDV P CSKQLLVICE
2022	P24091	64	CGPGNCQSQC P GGPTPPGGGD
2023	P24091	70	QSQCPCGGPT P GGGDLGSIIS
2024	P24091	251	CHDVIIGRWQ P SSADRAANRL
2025	P24091	262	SSADRAANRL P GFGVITNIIN
2026	P29602	16	IVGDNTGWSV P SSPNFYSQWA
2027	P29602	19	DNTGWSVPSS P NFYSQWAAGK
2028	P29602	42	RVGDSLQFN P ANAHNVHEME
2029	P29602	74	NSDNDVERTS P VIERLDELGM
2030	P29602	132	PSSVMPPPVM P PPSPSSPSPP
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2033	P30754	17	YIQAQVGPIG P RGPPGPPGSP
2034	P30754	20	AQVGPIGPRG P PGPPGSPGQQ
2035	P30754	23	GPIGPRGPPG P PGSPGQQGYQ
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2041	P30754	83	GPRGGIGPMG P RGAGGMPGMP
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2044	P30754	125	GNQGPDGGPG P AGPSGPIGPR
2045	P30754	131	GGPGPAGPSG P IGPRGQTGER
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2059	P30754	452	GKDGETGAAG P PGAAGPTGAR
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2063	P30754	521	GAPGDRGNVG P RGMPGERGAT
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2080	P30754	836	GNAGPQGPTG P SGQAGAPGQE
2081	P30754	893	GQRGLPGAAG P PGDRGERGEP
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2087	P30754	992	GPPGKDGQPG P SGRVGPRGPS
2088	P30754	998	GQPGPSGRVG P RGPSGDDGRS
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2095	P50982	51	TARRDPCCY H PTCNMSNPQIC
2096	P50982	58	CYHPTCNMS N PQICGGCIQPN
2097	P52285	40	MIEDIGESD S PIPLPNVTSTI
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2099	P52285	44	IGESD S PIPLPNVTSTILEKV
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2104	P52285	94	YDRDFCKVD Q PTLFELILAN
2105	P52285	110	ILAANYLD I KPLLDVTCKTVA
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2109	P56529	31	LMDGDQP A DRPAERMDYDISS
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2115	P58786	60	VLRRSGCP W EWCGGCWPEWP
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2122	P58808	18	IILLLLT A SAPGVVLPKTED
2123	P58808	24	TASAPGV V LPKTEDDVPMSS
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2125	P58841	14	QDCLVCIP C CPNNPCCPICVL
2126	P58843	14	CPWCGFT C CLPNYCQGLTCTV
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2131	P58846	49	ISFENNPFYD PA KRCCRTCFG
2132	P58913	75	PGLCCSEFCL PG VCFGGGGFC
2133	P58914	3	CPSGPPKCCK PP GSPCRVSSY
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2135	P58925	16	VLLTICLLLF PI TALPMDGDQ
2136	P58925	21	CLLLFPITAL PM DGDQPADRL
2137	P58925	27	ITALPMDGDQ PA DRLAERMQD
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2139	P58928	6	VLWPAAPWL VS QITTCGYN
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2141	P60274	9	RIIRDECCSN PA CRVNNPHVC
2142	P60513	13	CIKPYGFCSL PI LKNGLCCSG
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2146	P69765	46	QTRLINTRCC PG KPCCRIGGI
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2168	P84895	7	GPPRRPPGF SPP FRFPSPFGPP
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2191	P85153	222	LIFFCENQ P TF P EYNWWHINPL
2192	P85153	231	FPEYNWWHIN P LKWVEGENER
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2207	P85153	434	GPPGPAGKIV P MQFVNPGRET
2208	P85153	440	GKIVPMQFVN P GRETMPPVLS
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2214	P85153	544	NQMYQKSMQ P T P HGDQRYFKDC
2215	P85153	569	MTTKVSTEQ P NIQKCLYRDSH
2216	P85153	594	MWSRRKDYWS P HADYGYVAEQ

2217	P85153	628	KICWISMKYH P VSDHNNKEHC
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2220	P85153	665	GDQGASGPSG P AGPRRPGAPG
2221	P85153	668	GASGPSGPAG P RRPGAPGSPG
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2224	P85154	19	LGPGPMGLMG P RGPPGATGPP
2225	P85154	22	GPMGLMGPRG P PGATGPPGSP
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2233	P85154	44	FQGPGEPE P GQTGPAGSRG
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2242	P85154	92	PQGARGFPGT P GLPGFKGIRG
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2244	P85154	113	HNGLDGLKGQ P GAPGVKGEPG
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2248	P85154	131	EPGAPGENGT P GQIGARGLPG
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2253	P85154	166	GSDGSVGPV P GAPIGSAGPP
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2258	P85154	190	GAPGPKGEIG P VGNPGPSGPA
2259	P85154	194	PKGEIGPVGN P GPSGPAGPRG
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2261	P85154	199	GPVGNPGPSG P AGPRGEAGLP
2262	P85154	202	GNPGPSGPAG P RGEAGLPGV
2263	P85154	209	PAGPRGEAGL P GVSGPVGP
2264	P85154	214	GEAGLPGVSG P VGP
2265	P85154	217	GLPGVSGPVGP P GNPGANGLA
2266	P85154	218	LPGVSGPVGP P GNPGANGLAG
2267	P85154	221	VSGPVGP P GN P GANGLAGAKG
2268	P85154	236	LAGAKGAAGL P GVAGAPGLPG
2269	P85154	245	LPGVAGAPGL P GPRGIPGPVG
2270	P85154	247	GVAGAPGLPG P RGIPGPVGAA
2271	P85154	251	APGLPGPRGI P GPVGAAGATG
2272	P85154	253	GLPGPRGIPG P VGAAGATGAR
2273	P85154	269	ATGARGIVGE P GPAGSKGESG
2274	P85154	271	GARGIVGEPG P AGSKGESGSK
2275	P85154	289	GSKGEPGSAG P QGPPGPSGEE
2276	P85154	292	GEPGSAGPQG P PGPSGEEGKR
2277	P85154	295	GSAGPQGPPG P SGEEGKRGN
2278	P85154	304	GPSGEEGKR P NGEAGSAGPA
2279	P85154	313	GPNGEAGSAG P AGPPGLRGGP
2280	P85154	316	GEAGSAGPAG P PGLRGGPGSR
2281	P85154	317	EAGSAGPAG P PGLRGGPGSRG
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2286	P85154	349	GPPGSRGASG P AGVRGPSGDS
2287	P85154	355	GASGPAGVRG P SGDSGRPGEP
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2289	P85154	365	PSGDSGRPG P GVMGPRGLPG
2290	P85154	370	GRPGEPGVMG P RGLP
2291	P85154	374	EPGVMGPRGL P GS
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2293	P85154	382	GLPGSPGNVG P AGKEGPAGLP
2294	P85154	388	GNVGPAGKEG P AGLP
2295	P85154	392	PAGKEGPAGL P GIDGRPGPIG
2296	P85154	398	PAGLPIDGR P GPIGPAGARG
2297	P85154	400	GLPGIDGRPG P IGPAGARGE
2298	P85154	403	GIDGRPGPIG P AGARGE
2299	P85154	416	ARGE
2300	P85154	418	GE
2301	P85154	421	GNIGFPGPKG P AGDPGKNGDK
2302	P85154	425	FPGPKGPAGD P GKNGDKGHAG
2303	P85154	439	GDKGHAGLAG P RGAPGPDGNN
2304	P85154	443	HAGLAGPRGA P GPDGNNGAQG

2305	P85154	445	GLAGPRGAPG P DGNNGAQGGP
2306	P85154	454	GPDGNNGAQGG P PGLQGVQGGK
2307	P85154	455	PDGNNGAQGG P PGLQGVQGGKG
2308	P85154	469	GVQGGKGEG Q GPAGPPGFQGLP
2309	P85154	472	GGKGEGQGPAG P PGFQGLPGPS
2310	P85154	481	GPPGFQGLPG P SGTAGEAGKP
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2312	P85154	508	GEFGLPGPAG P RGERGPPGQS
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2317	P85154	532	GPTGPIGSRG P SGPPGPDGNK
2318	P85154	538	GSRGPSGPPG P DGNKGEPGVV
2319	P85154	545	PPGPDGNKG E PGVVGAPGTAG
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2322	P85154	559	GAPGTAGPSG P VGLPGERGAA
2323	P85154	563	TAGPSGPVGL P GERGAAGIPG
2324	P85154	572	LPGERGAAGI P GGKGKEKGETG
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2327	P85154	625	GEAGPAGSAG P AGPRGSPGER
2328	P85154	628	GPAGSAGPAG P RGSPGERGEV
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2331	P85154	643	GERGEVGPAG P NGFAGPAGAA
2332	P85154	649	GPAGPNGFAG P AGAAGQAGAK
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2334	P85154	673	G T KG P KGENG P VGPTGPVGAA
2335	P85154	676	G P KGENGPVG P TGPVGAAGPA
2336	P85154	679	GENGPVGPTG P VGAAGPAGPN
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2362	P85154	830	IAGPPGARGPPGAVGSPGVNG
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2373	P85154	889	GTAGAPGPQGGLGPAGKHGNR
2374	P85154	892	GAPGPQGGLGPAGKHGNRGEP
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2392	P85154	1012	GSQGSQGSPPGPPGPPGPP

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2402	P86256	2	CMRYGCCPDD P CCGYRMCVPC
2403	P86289	26	GARGPSGPQG P SGAPGPKGVQ
2404	P86289	32	GPQGSPGAPG P KGVQGPPGPQ
2405	P86289	38	GAPGPKGVQG P PGPQGPRGLT
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2415	P86289	103	AGRGETGPAG P AGPPGPAGAR
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2418	P86290	11	GSNGEPGSAG P PGPAGLRGLP
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2421	P86290	29	GLPGESGAVG P PAGPPGSRRSG
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2427	Q02388	67	VRSFLEGLVL P FSGAASAQGV
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2431	Q02388	141	FLPQLARPGV P KVCILITDGK
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2433	Q02388	190	PEELKRVASQ P TSDFFFVND
2434	Q02388	209	NDFSILRTL P LVSRRVCTTA
2435	Q02388	223	RRVCTTAGGV P VTRPPDDSTS
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2437	Q02388	228	TAGGVPVTRP P DDSTSAPRDL
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2439	Q02388	243	SAPRDLVLSE P SSQSLRVQWT
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2441	Q02388	268	PVTGYKVQYT P LTGLGQPLPS
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2444	Q02388	286	LPSERQEVNV P AGETSVRLRG
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2450	Q02388	387	QGSVLLRDLE P GTDYEVTVST
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2458	Q02388	476	VTRYQLDGLQ P GTEYRLTLYT
2459	Q02388	496	TLLEGHEVAT P ATVVPTGP
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2478	Q02388	675	VSVLRGREG P AAVIVARTDP
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2603	Q02388	1536	PTGRQGEKG E PGRPGDPAVVG
2604	Q02388	1539	RQGEKGEPGR P GDPAVVGPAV
2605	Q02388	1542	EKGEPGRPGD P AVVGPAVAGP
2606	Q02388	1547	GRPGDPAVVG P AVAGPKGEKG
2607	Q02388	1552	PAVVGPAVAG P KGEKGDVGPA
2608	Q02388	1561	GPKGEKGDVG P AGPRGATGVQ
2609	Q02388	1564	GEKGDVGPA G PRGATGVQGER
2610	Q02388	1576	GATGVQGERG P PGLVLPGDGP
2611	Q02388	1577	ATGVQGERGP P GLVLPGDGP
2612	Q02388	1582	GERGPPGLVL P GDGPVKGDGP

2613	Q02388	1585	GPPGLVLPGD P GPKGDPGDRG
2614	Q02388	1587	PGLVLPGD P GKDPGDRGPI
2615	Q02388	1591	LPGD P GPKGD P GDRGPIGLTG
2616	Q02388	1596	GPKGDPGDRG P IGLTGRAGPP
2617	Q02388	1605	GPIGLTGRAG P PGDSGPPGEK
2618	Q02388	1606	PIGLTGRAG P PGDSGPPGEKG
2619	Q02388	1611	GRAGPPGDSG P PGEEKGDPGRP
2620	Q02388	1612	RAGPPGDSG P PGEEKGDPGRPG
2621	Q02388	1618	DSGPPGEKG D PGRPGPPGPVG
2622	Q02388	1621	PPGEKGDPGR P PGPPGPVGPRG
2623	Q02388	1623	GEKGDPGRPG P PGPVGPRGRD
2624	Q02388	1624	EKGDPGRPG P PGPVGPRGRDG
2625	Q02388	1626	GDPGRPGPPG P VGPRGRDGEV
2626	Q02388	1629	GRPGPPGPVG P RGRDGEVGEK
2627	Q02388	1644	GEVGEKGDEG P PGDPGLPGKA
2628	Q02388	1645	EVGEKGDEG P PGDPGLPGKAG
2629	Q02388	1648	EKGDEGPPGD P GLPGKAGERG
2630	Q02388	1651	DEGPPGDPGL P GKAGERGLRG
2631	Q02388	1663	KAGERGLRG A PGVRGPVGEKG
2632	Q02388	1668	GLRGAPGVRG P VGEKGDQQDP
2633	Q02388	1678	PVGEKGDQGD P GEDGRNGSPG
2634	Q02388	1687	DPGEDGRNGS P GSSGPKGDRG
2635	Q02388	1692	GRNGSPGSSG P KGDRGEPGPP
2636	Q02388	1699	SSGPKGDRGE P PGPPGPPGRLV
2637	Q02388	1701	GPKGDRGEPG P PGPPGRLVDT
2638	Q02388	1702	PKGDRGEPGP P PGPPGRLVDTG
2639	Q02388	1704	GDRGEPGPPG P PGRLVDTGPG
2640	Q02388	1705	DRGEPGPPGP P PGRLVDTGPGA
2641	Q02388	1713	GPPGRLVDTG P GAREKGEPGD
2642	Q02388	1721	TGPGAREKGE P GDRGQEGPRG
2643	Q02388	1729	GEPGDRGQEG P RGPKGDPGLP
2644	Q02388	1732	GDRGQEGPRG P KGDPGLPGAP
2645	Q02388	1736	QEGPRGPKGD P GLPGAPGERG
2646	Q02388	1739	PRGPKGDPGL P GAPGERGIEG
2647	Q02388	1742	PKGDPGLPGA P GERGIEGFRG
2648	Q02388	1753	GERGIEGFRG P PGPQGDPGVR
2649	Q02388	1754	ERGIEGFRGP P GPQGDPGVRG
2650	Q02388	1756	GIEGFRGPPG P QGDPGVRGPA
2651	Q02388	1760	FRGPPGPQGD P GVRGPAGEKG
2652	Q02388	1765	GPQGDPGVRG P AGEKGDRGPP
2653	Q02388	1774	GPAGEKGDRG P PGLDGRSGLD
2654	Q02388	1775	PAGEKGDRGP P GLDGRSGLDG
2655	Q02388	1787	LDGRSGLDGK P GAAAGPSGPNG
2656	Q02388	1792	GLDGKPGAAG P SGPNGAAGKA

2657	Q02388	1795	GKPGAAGPSG P NGAAGKAGDP
2658	Q02388	1805	PNGAAGKAGD P GRDGLPGLRG
2659	Q02388	1811	KAGDPGRDGL P GLRGEQGLPG
2660	Q02388	1820	LPGLRGEQGL P GPSGPPGLPG
2661	Q02388	1822	GLRGEQGLPG P SGPPGLPGKP
2662	Q02388	1825	GEQGLPGPSG P PGLPGKPGED
2663	Q02388	1826	EQGLPGPSGP P GLPGKPGEDG
2664	Q02388	1829	LPGPSGPPGL P PKPGEDGKPG
2665	Q02388	1832	PSGPPGLPGK P GEDGKPGLN
2666	Q02388	1838	LPKPGEDGK P GLNGKNGEPG
2667	Q02388	1847	KPGLNGKNGE P GDPGEDGRKG
2668	Q02388	1850	LNGKNGEPGD P GEDGRKGEKG
2669	Q02388	1873	GASGREGRDG P KGERGAPGIL
2670	Q02388	1880	RDGPKGERGA P GILGPQGPPG
2671	Q02388	1885	GERGAPGILG P QGPPGLPGPV
2672	Q02388	1888	GAPGILGPQG P PGLPGVGP
2673	Q02388	1889	APGILGPQGP P GLPGVGP
2674	Q02388	1892	ILGPQGPPGL P GPVGP
2675	Q02388	1894	GPQGPPGLPG P VGP
2676	Q02388	1897	GPPGLPGVGP P PGQGFPVGP
2677	Q02388	1898	PPGLPGVGP P QGFPVGP
2678	Q02388	1903	GPVGP P QGFPVGP
2679	Q02388	1906	GPPQGFPVGP P GGTGPKGDRG
2680	Q02388	1911	GFPVGP P GGTGPKGDRG
2681	Q02388	1927	ETGSKGEQGL P GERGLRGE
2682	Q02388	1936	LPGERGLRGE P GSVPNVDRLL
2683	Q02388	1940	RGLRGE P GSVPNVDRLL
2684	Q02388	1972	TWDESSGSFL P VPERRRGPKG
2685	Q02388	1974	DESSGSFL P VPERRRGPKGDS
2686	Q02388	1980	FLVPERRRG P KGDSGEQGP
2687	Q02388	1989	GPKGDSGEQ P PGKEGP
2688	Q02388	1990	PKGDSGEQGP P PGKEGP
2689	Q02388	1995	GEQGPPGKEG P IGFPGERGLK
2690	Q02388	1999	PPGKEGP P IGFPGERGLK
2691	Q02388	2011	ERGLKGDRGD P GPQGPPGLAL
2692	Q02388	2013	GLKGDRGD P GPQGPPGLAL
2693	Q02388	2016	GDRGD P GPQGPPGLALGERGP
2694	Q02388	2017	DRGD P GPQGPPGLALGERGP
2695	Q02388	2026	PPGLALGERG P PGPSGLAGEP
2696	Q02388	2027	PGLALGERGP P PGPSGLAGEP
2697	Q02388	2029	LALGERGP P PSGLAGEP
2698	Q02388	2036	PPGPSGLAGE P PKPGIPGLPG
2699	Q02388	2039	PSGLAGEPGK P GIPGLPGRAG
2700	Q02388	2042	LAGEPGKPGI P GLPGRAGVG

2701	Q02388	2045	EPGKPGIPGL P GRAGGVGEAG
2702	Q02388	2057	RAGGVGEAGR P GERGERGEKG
2703	Q02388	2077	GERGEQGRDGP P PGLPGTPGPP
2704	Q02388	2078	ERGEQGRDGP P GLPGTPGPPG
2705	Q02388	2081	EQGRDGPPGL P GTPGPPGPPG
2706	Q02388	2084	RDGPPGLPGT P GPFGPPGPKV
2707	Q02388	2086	GPPGLPGTPG P PGPPGPKVSV
2708	Q02388	2087	PPGLPGTPGP P GPFGPKVSVD
2709	Q02388	2089	GLPGTPGPPG P PGPKVSVDEP
2710	Q02388	2090	LPGTGPPGPP P GPVKVSVDEPG
2711	Q02388	2092	GTPGPPGPPG P PKVSVDEPGPG
2712	Q02388	2099	PPGPKVSVDE P GPGLSGEQGP
2713	Q02388	2101	GPKVSVDEPG P GLSGEQGPPG
2714	Q02388	2109	PGPGLSGEQG P PGLKGAKGEP
2715	Q02388	2110	GPGLSGEQGP P PGLKGAKGEPG
2716	Q02388	2119	PPGLKGAKGE P GSNGDQGPKG
2717	Q02388	2127	GEPGSNGDQG P KGDRGVPGIK
2718	Q02388	2134	DQGPKGDRGV P GIKGDRGEPG
2719	Q02388	2143	VPGIKGDRGE P GPRGQDGNPG
2720	Q02388	2145	GIKGDRGEPG P RGQDGNPGLP
2721	Q02388	2152	EPGPRGQDGN P GLPGERGMAG
2722	Q02388	2155	PRGQDGNPGL P GERGMAGPEG
2723	Q02388	2163	GLPGERGMAG P EGKPGLQGPR
2724	Q02388	2172	GPEGKPGLQG P RGPPGPVGGH
2725	Q02388	2175	GKPGLQGPRG P PGPVGGHGD
2726	Q02388	2178	GLQGPRGPPG P VGGHGDGPP
2727	Q02388	2187	GPVGGHGDGP P PGAPGLAGPA
2728	Q02388	2191	GHGDGPPGA P GLAGPAGPQG
2729	Q02388	2196	GPPGAPGLAG P AGPQGPSGLK
2730	Q02388	2199	GAPGLAGPAG P QGPSGLKGEP
2731	Q02388	2202	GLAGPAGPQG P PSGLKGEPGET
2732	Q02388	2209	PQGPSGLKG P GETGPPGRGL
2733	Q02388	2214	GLKGEPGETG P PGRGLTGPTG
2734	Q02388	2215	LKGEPGETGP P GRGLTGPTGA
2735	Q02388	2222	TGPPGRGLTG P TGAVGLPGPP
2736	Q02388	2229	LTGPTGAVGL P GPFGPSGLVG
2737	Q02388	2231	GPTGAVGLPG P PGPSGLVGPQ
2738	Q02388	2232	PTGAVGLPGP P GPFGPSGLVGPQG
2739	Q02388	2234	GAVGLPGPPG P PSGLVGPQGSP
2740	Q02388	2240	GPPGPSGLVG P QGSPGLPGQV
2741	Q02388	2244	PSGLVGPQGS P GLPGQVGETG
2742	Q02388	2247	LVGPQGSPGL P GQVGETGKPG
2743	Q02388	2256	LPQVGETGK P GAPGRDGASG
2744	Q02388	2259	QVGETGKPGA P GRDGASGKDG

2745	Q02388	2274	ASGKDGDGRGS P GVPGSPGLPG
2746	Q02388	2277	KDGDGRGSPGV P GSPGLPGPVG
2747	Q02388	2280	DRGSPGVPGS P GLPGVPVGPKG
2748	Q02388	2283	SPGVPGSPGL P GPVGPKGEFG
2749	Q02388	2285	GVPGSPGLPG P VGPKGEFGPT
2750	Q02388	2288	GSPGLPGPVG P KGEFGPTGAP
2751	Q02388	2292	LPGPVGPKGE P GPTGAPGQAV
2752	Q02388	2294	GPVGPKGEFG P TGAPGQAVVG
2753	Q02388	2298	PKGEFGPTGA P GQAVVGLPGA
2754	Q02388	2306	GAPGQAVVGL P GAKEKGAPG
2755	Q02388	2315	LPGAKEKG P GGLAGDLVGE
2756	Q02388	2326	GGLAGDLVGE P GAKGDRGLPG
2757	Q02388	2335	EPGAKGDRGL P GPRGEKGEAG
2758	Q02388	2337	GAKGDRGLPG P RGEKGEAGRA
2759	Q02388	2350	EKGEAGRAGE P GDPEGEDGQKG
2760	Q02388	2353	EAGRAGEPGD P GEDGQKGAPG
2761	Q02388	2362	DPGEDGQKG P GPKGFKGDPG
2762	Q02388	2364	GEDGQKGAPG P KGFKGDPGVG
2763	Q02388	2371	APGPKGFKGD P GVGVPGSPGP
2764	Q02388	2376	GFKGDPGVGV P GSPGPPGPPG
2765	Q02388	2379	GDPGVGVPGS P GPPGPPGVKG
2766	Q02388	2381	PGVGVPGPS P PGPPGVKDDL
2767	Q02388	2382	GVGVPGSPGP P GPPGVKDDL
2768	Q02388	2384	GVPGSPGPPG P PGVKDDLGLP
2769	Q02388	2385	VPGPSGPPGP P GVKDDLGLPG
2770	Q02388	2394	PPGVKDDLGL P GLPGAPGVVG
2771	Q02388	2397	VKDDLGLPGL P GAPGVVGFP
2772	Q02388	2400	DLGLPGLPGA P GVVGFPQTG
2773	Q02388	2406	LPGAPGVVG P QTGPRGEMG
2774	Q02388	2411	GVVGFPQTG P RGEMGQPGPS
2775	Q02388	2418	QTGPRGEMG P GPSGERLAG
2776	Q02388	2420	GPRGEMGQ P PSGERLAGPP
2777	Q02388	2429	GPSGERLAG P PGREGIPGPL
2778	Q02388	2430	PSGERLAG P PGREGIPGPLG
2779	Q02388	2436	LAGPPGREGI P GPLGPPGPPG
2780	Q02388	2438	GPPGREGIPG P LGPPGPPGSV
2781	Q02388	2441	GREGIPGPLG P PGPPGSVGPP
2782	Q02388	2442	REGIPGPLG P PGPPGSVGPPG
2783	Q02388	2444	GIPGPLGPPG P PGSVGPPGAS
2784	Q02388	2445	IPGPLGPPGP P GSVGPPGASG
2785	Q02388	2450	GPPGPPGSVG P PGASGLKGD
2786	Q02388	2451	PPGPPGSVG P PGASGLKGD
2787	Q02388	2463	ASGLKGDGD P GVGLPGPRGE
2788	Q02388	2468	GDKGDPGVGL P GPRGERGEPG

2789	Q02388	2470	KGDPGVGLPG P RGERGEPGIR
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2791	Q02388	2486	EPGIRGEDGR P GQEGPRGLTG
2792	Q02388	2491	GEDGRPGQEG P RGLTGPPGSR
2793	Q02388	2497	GQEGPRGLTG P PGSRGERGEK
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2795	Q02388	2528	DKGDSAVILG P PGPRGAKGDM
2796	Q02388	2529	KGDSAVILG P PGPRGAKGDMG
2797	Q02388	2531	DSAVILGPPG P RGAKGDMGER
2798	Q02388	2543	GAKGDMGERG P RGLDGDKGPR
2799	Q02388	2552	GPRGLDGDKG P RGDNGDPGDK
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2801	Q02388	2568	DPGDKGSKGE P GDKGSAGLPG
2802	Q02388	2577	EPGDKGSAGL P GLRGLLGPQG
2803	Q02388	2585	GLPGLRGLL P QGQPGAAGIP
2804	Q02388	2589	LRGLLGPQG P GAAGIPGDPG
2805	Q02388	2595	PQGQPGAAGI P GDPGSPGKDG
2806	Q02388	2598	QPGAAGIPGD P GSPGKDGVPG
2807	Q02388	2601	AAGIPGDPGS P GKDGVPGIRG
2808	Q02388	2607	DPGSPGKDG V PGIRGEKGDVG
2809	Q02388	2621	GEKGDVGFMG P RGLKGERGVK
2810	Q02388	2648	GEKGDKEAG P PGRPGLAGHK
2811	Q02388	2649	EKGDKEAG P PGRPGLAGHKG
2812	Q02388	2652	DKGEAGPPG P GLAGHKGEMG
2813	Q02388	2681	GAPGKEGLIG P KGDRGFDGQP
2814	Q02388	2691	PKGDRGFDG Q PGPKGDQGEKG
2815	Q02388	2693	GDRGFDG Q PGPKGDQGEKGER
2816	Q02388	2706	DQGEKGERGT P GIGGFPGPSG
2817	Q02388	2712	ERGTPGIGGF P GPSGNDGSAG
2818	Q02388	2714	GTPGIGGF P PSGNDGSAGPP
2819	Q02388	2723	GPSGNDGSAG P PGPPGSGVPR
2820	Q02388	2724	PSGNDGSAG P PGPPGSGVPRG
2821	Q02388	2726	GNDGSAGPPG P PGSVGPRGPE
2822	Q02388	2727	NDGSAGPPG P PGSVGPRGPEG
2823	Q02388	2732	GPPGPPGSG V PRGPEGLQGQK
2824	Q02388	2735	GPPGSGVPRG P EGLQGQKGER
2825	Q02388	2747	GLQGQKGERG P PGERVVGAPG
2826	Q02388	2748	LQGQKGERGP P GERVVGAPGV
2827	Q02388	2756	GPPGERVVG A PGVPGAPGERG
2828	Q02388	2759	GERVVGAPG V PGAPGERGEQG
2829	Q02388	2762	VVGAPGVPG A PGERGEQGRPG
2830	Q02388	2771	APGERGEQGR P GPAGPRGEKG
2831	Q02388	2773	GERGEQGRPG P AGPRGEKGEA
2832	Q02388	2776	GEQGRPGP A GRGEKGEAALT

2833	Q02388	2815	QQQFIASGSR P LPSYAADTAG
2834	Q02388	2817	QFIASGSRPL P SYAADTAGSQ
2835	Q02388	2832	DTAGSQLHAV P VLRVSHAE
2836	Q02388	2846	VSHAEER V P PEDDEYSEYS
2837	Q02388	2847	SHAEER V P PEDDEYSEYSE
2838	Q02388	2866	SEYSVEEYQD P EAPWDSDDPC
2839	Q02388	2869	SVEEYQD P EAPWDSDDPCSLP
2840	Q02388	2875	DPEAPWDSDD P CSLPLDEGSC
2841	Q02388	2879	PWDSDDPCSL P LDEGSCTAYT
2842	Q02388	2906	AVTGSTEACH P FBVYGGCGGNA
2843	Q02388	2930	GTREACERRC P PRVVQSQGTG
2844	Q02388	2931	TREACERRCP P RVVQSQGTGT
2845	Q05707	14	FQRKMRYWLL P PFLAIVYFCT
2846	Q05707	15	QRKMRYWLL P PFLAIVYFCTI
2847	Q05707	32	FCTIVQGQVA P PTRLRYNVIS
2848	Q05707	33	CTIVQGQVAP P TRLRYNVISH
2849	Q05707	53	HDSIQISWKA P RGKFGGYKLL
2850	Q05707	66	KFGGYKLL V T PTSGGKTNQLN
2851	Q05707	91	ATKAI IQGLM P DQNYTVQIIA
2852	Q05707	110	IAYNKDKESK P AQGQFRIKDL
2853	Q05707	126	RIKDLEKRKD P KPRVKVDRG
2854	Q05707	128	KDLEKRKDPK P RVKVVDRGNG
2855	Q05707	141	KVVDRGNGSR P SSPEEVKFVC
2856	Q05707	144	DRGNGSRPSS P EEVKFVCQTP
2857	Q05707	154	PEEVKFVCQT P AIADIVILVD
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2859	Q05707	229	DEVIEAVRN L P YKGGNTLTGL
2860	Q05707	251	LNIFENSFK P EAGSRTGVSK
2861	Q05707	277	TDGKSQDDI I P PSRNLRESGV
2862	Q05707	278	DGKSQDDI I P PSRNLRESGVE
2863	Q05707	309	VNELQEIA S E P DSTHVYNVAE
2864	Q05707	355	IKASAHAI T G P PTELITSEVT
2865	Q05707	356	KASAHAI T G P PTELITSEVTA
2866	Q05707	377	RSFMVNWTHA P GNVEKYRVVY
2867	Q05707	389	NVEKYRVVY Y P TRGGKPDEVV
2868	Q05707	395	VVYYPTRGGK P DEVVVDGTVS
2869	Q05707	444	LRGTETTLAL P MASDLLLYDV
2870	Q05707	467	NSMRVKWDAV P GASGYLILYA
2871	Q05707	478	GASGYLILYA P LTEGLAGDEK
2872	Q05707	506	HTDIELSGLL P NTEYTVTVYA
2873	Q05707	525	YAMFGEEASD P VTGQETTLAL
2874	Q05707	537	TGQETTLALS P PRNLRISNVG
2875	Q05707	538	GQETTLALS P PRNLRISNVGS
2876	Q05707	557	GSNSARLTWD P TSRQINGYRI

2877	Q05707	584	GTEINEVEVD P ITTFPLKGLT
2878	Q05707	589	EVEVDPITTF P LKGLTPLTEY
2879	Q05707	595	ITTFPLKGLT P LTEYTIAIFS
2880	Q05707	614	FSIYDEGQSE P LTGVFTTEEV
2881	Q05707	625	LTGVFTTEEV P AQQYLEIDEV
2882	Q05707	646	TTDSFRVTWH P LSADEGLHKL
2883	Q05707	660	DEGLHKLMWI P VYGGKTEEVV
2884	Q05707	685	QDSHVIEGLE P GTEYEVSLLA
2885	Q05707	720	GTTLDSEFWTE P ATTIVPTTSV
2886	Q05707	726	FWTEPATTIV P TTSVTSVFQT
2887	Q05707	776	RVTYMTAQGD P EEEEVIGTVMV
2888	Q05707	787	EEEEVIGTVMV P GSQNNLLLK
2889	Q05707	797	PGSQNNLLLK P LLPDTEYKVT
2890	Q05707	800	QNNLLLK P LLPDTEYKVTVP
2891	Q05707	810	PDTEYKVTVP P IYTDGEGVSV
2892	Q05707	823	TDGEGVSVS P AGKTLPSGGPQ
2893	Q05707	828	VSVSAPGKTL P SSGPQNLRVS
2894	Q05707	832	APGKTLPSGG P QNLRVSEEWY
2895	Q05707	851	WYNRLRITWD P PSSPVKGYRI
2896	Q05707	852	YNRLRITWD P PSSPVKGYRIV
2897	Q05707	855	LRITWDPPSS P VKGYRIVYKP
2898	Q05707	865	PVKGYRIVYK P VSVPGPTLET
2899	Q05707	869	YRIVYKPVSV P GPPTLETFGA
2900	Q05707	871	IVYKPVSV P GPPTLETFGADI
2901	Q05707	979	TTRHCFYGLQ P DSEYKISVYT
2902	Q05707	997	VYTKLQEIEG P SVSIMEKTQS
2903	Q05707	1009	VSIMEKTQSL P TRPPTFPPTI
2904	Q05707	1012	MEKTQSLP P TRPPTFPPTIPPA
2905	Q05707	1013	EKTQSLP P TRPPTFPPTIPPAK
2906	Q05707	1016	QSLP P TRPPTFPPTIPPAKEVC
2907	Q05707	1017	SLP P TRPPTFPPTIPPAKEVCK
2908	Q05707	1020	TRP P PTFPPTIPPAKEVCKAAK
2909	Q05707	1021	RP P PTFPPTIPPAKEVCKAACA
2910	Q05707	1081	QVAMVQFTDD P RTEFKLNAYK
2911	Q05707	1135	TAESGTRRG P IKVIVVITDGR
2912	Q05707	1184	YSELVSI P SGSKPSARHVFFVDD
2913	Q05707	1218	FVCETASATC P VVHKDGIDLA
2914	Q05707	1253	FSSVEGVSME P GTFNVFPCYQ
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2917	Q05707	1279	LVSQ P TRYLHPEGLPSDYTIS
2918	Q05707	1283	PTRYLHPEGL P SDYTISFLFR
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2923	Q05707	1347	GDFQTVTFEG P EIRKIFYGSF
2924	Q05707	1406	VLGKMVRSRG P GGNSAPFQLQ
2925	Q05707	1412	RSRGPGGNSA P FQLQMFDIVC
2926	Q05707	1436	WANTDKCC E L P GLRDDESCPD
2927	Q05707	1445	LPGLRDDESC P DLPHSCSCSE
2928	Q05707	1448	LRDDESCPD L PHSCSCSETNE
2929	Q05707	1463	CSETNEVALG P AGPPGGPGLR
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2931	Q05707	1475	GPPGGPGLRG P KGQQGEPGPK
2932	Q05707	1484	GPKGQQGEPG P KGPDGPRGEI
2933	Q05707	1487	GQQGEPGPKG P DGPRGEIGLP
2934	Q05707	1490	GEPGPKGPDG P RGEIGLPGPQ
2935	Q05707	1499	GPRGEIGLPG P QGPPGPQGPS
2936	Q05707	1502	GEIGLPGPQG P PGPQGPSGLS
2937	Q05707	1505	GLPGPQGPPG P QGPSGLSIQG
2938	Q05707	1508	GPQGPPGPQG P SGLSIQGMPG
2939	Q05707	1534	GEKGD T GLPG P QGIPGGVGSP
2940	Q05707	1564	GLPGKDGSSG P PGPPGPIGIP
2941	Q05707	1567	GKDGSSGPPG P PGPIGIPGTP
2942	Q05707	1570	GSSGPPGP P PGPIGIPGTPGVP
2943	Q05707	1588	GVPGITGSMG P QGALGPPGVP
2944	Q05707	1594	GSMGPQALG P PGVPGAKGER
2945	Q05707	1655	HSSSIRTVQG P PGEPGRPGSP
2946	Q05707	1673	GSPGAPGEQG P PGTPGFPGNA
2947	Q05707	1711	KGNPGVGTQG P RGPPGPAGPS
2948	Q05707	1714	PGVGTQGPRG P PGPAGPSGES
2949	Q05707	1717	GTQGPRGPPG P AGPSGESRPG
2950	Q05707	1720	GPRGPPGPAG P SGESRPGSPG
2951	Q05707	1731	SGESRPGSPG P PGSPGPRGPP
2952	Q05707	1737	GSPGPPGSPG P RGPPGHLGVP
2953	Q05707	1740	GPPGSPGPRG P PGHLGVPGPQ
2954	Q05707	1749	GPPGHLGVPG P QGPPSGQPGYC
2955	Q05707	1752	GHLGVPGPQG P SGQPGYCDPS
2956	Q05707	1761	GPSGQPGYCD P SSCSAYGVRA
2957	Q05707	1772	SSCSAYGVRA P HPDQPEFTPV
2958	Q05707	1774	CSAYGVRA P DQPEFTPVQD
2959	Q05707	1777	YGVRA P HPDQ P EFTPVQDELE
2960	Q05707	1781	APHPDQPEFT P VQDELEAMEL
2961	Q05707	1794	DELEAMELWG P GVVGPWLEM
2962	Q0VKG8	55	EGNQEERRDR P PSWIPKKPIW
2963	Q0VKG8	60	ERRDRPPSWI P KKPIWSPPRD
2964	Q0VTT8	50	EQSEEKKRFE P VPPGFTPFRQ

2965	Q0VTT8	53	EEKKRFEFVPP P GFTPFRTTQ
2966	Q0VTT8	57	RFEPVPPGFT P FRQTTQRFPT
2967	Q15848	14	LGAVLLLLLAL P GHQDQETTTQG
2968	Q15848	25	GHDQETTTQG P GVLLPLPKGA
2969	Q15848	30	TTTQGPGVLL P LPGACTGWM
2970	Q15848	32	TQGPVLLPL P KGACTGWMAG
2971	Q15848	62	APGRDGRDGT P GEKGEKGDGP
2972	Q15848	86	PKGDIGETGV P GAEGPRGFPG
2973	Q15848	104	FPGIQGRKGE P GEGAYVYRSA
2974	Q15848	126	SVGLETYVTI P NMPIRFTKIF
2975	Q15848	129	LETYVTIPNM P IRFTKIFYNQ
2976	Q15848	155	GSTGKFHCNI P GLYYFAYHIT
2977	Q16665	45	EVFYELAHQL P LPHNVSSHLD
2978	Q16665	47	FYELAHQLPL P HNVS SHLDA
2979	Q16665	138	TGHSVDFDTH P CDHEEMREML
2980	Q16665	208	IHVYDTNSNQ P QCGYKKPPMT
2981	Q16665	215	SNQPQCGYKK P PMTCLVLICE
2982	Q16665	216	NQPQCGYKK P PMTCLVLICEP
2983	Q16665	226	PMTCLVLICE P IPHP SNIEIP
2984	Q16665	228	TCLVLICEPI P HP SNIEIPLD
2985	Q16665	230	LVLICEPIPH P SNIEIPLDSK
2986	Q16665	236	PIPHPSNIEI P LD SKTFLSRH
2987	Q16665	267	ERITELMGYE P EELLGRSIYE
2988	Q16665	332	TVIYNTKNSQ P QCIVCVNYVV
2989	Q16665	363	SLQQTECVLK P VESSDMKMTQ
2990	Q16665	394	SSLFDKLLKKE P DALTLLAPAA
2991	Q16665	429	ETDDQQLEEV P LYNDVMLPSP
2992	Q16665	437	EVPLYNDVML P SPNEKLQNIN
2993	Q16665	439	PLYNDVMLPS P NEKLQNINLA
2994	Q16665	452	KLQNINLAM P LP TAETPKPL
2995	Q16665	454	QNINLAM P LP TAETPKPLRS
2996	Q16665	459	AMSPLPTAET P KPLRSSADPA
2997	Q16665	461	SPLPTAETPK P LRSSADPALN
2998	Q16665	468	TPKPLRSSAD P ALNQEVALKL
2999	Q16665	480	LNQEVALKLE P NPESLELSFT
3000	Q16665	482	QEVALKLEPN P ESLELSFTMP
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3002	Q16665	499	FTMPQIQDQT P SPSDGSTRQS
3003	Q16665	501	MPQIQDQTP P SPDGSTRQSSP
3004	Q16665	511	PSDGSTRQSS P EPNSPSEYCF
3005	Q16665	513	DGSTRQSS P EPNSPSEYCFYV
3006	Q16665	516	TRQSSPEPNS P SEYCFYVDS
3007	Q16665	549	LFAEDTEAKN P FSTQD TDLDL
3008	Q16665	567	LDLEMLAPYI P MDDDFQLRSF

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3010	Q16665	590	LSPLESSSASPESASPQSTVT
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3012	Q16665	610	TVFQQTQIQEPTANATTTTAT
3013	Q16665	642	MEDIKILIASPSPTHIHKETT
3014	Q16665	644	DIKILIASPSPTHIHKET TSA
3015	Q16665	658	HKETTSATSSPYRDTQSRTAS
3016	Q16665	669	YRDTQSRTASPNRAGKGVIEQ
3017	Q16665	685	GVIEQTEKSHPRSPNVLSVAL
3018	Q16665	688	EQTEKSHPRSPNVLSVALSQR
3019	Q16665	702	SVALSQRTTVPEEELNPKILA
3020	Q16665	708	RTTVPEEELNPKILALQNAQR
3021	Q16665	741	AVGIGTLLQQPDDHAATTSL
3022	Q16665	775	GMEQKTIILIPSDLACRLLGQ
3023	Q16665	793	LGQSMDESGLPQLTSYDCEVN
3024	Q16665	805	LTSYDCEVNAPIQGSRNLLQG
3025	Q24940	100	RASDILSHGVPEYANNRAVPD
3026	Q24940	166	SEQQLVDCSGPWGNGCSGGL
3027	Q24940	238	ELKNLVGARRPAAVAVDVESD
3028	Q24940	264	SGIYQSQTCSPLRVNHAVLAV
3029	Q24940	320	MCGIASLASLPMVARFPPFRA
3030	Q24940	326	LASLPMVARFPPFRAVMPLSA
3031	Q25460	5	VPEHKTTKHEPVYKPVKTSYS
3032	Q25460	9	KTTKHEPVYKPVKTSYSAPYK
3033	Q25460	17	YKPVKTSYSAPYKPPTYQPLK
3034	Q25460	20	VKTSYSAPYKPTYQPLKKKV
3035	Q25460	21	KTSYSAPYKPTYQPLKKKVD
3036	Q25460	25	SAPYKPPTYQPLKKKVDYRPT
3037	Q25460	34	QPLKKKVDYRPTKSYPPPTYGS
3038	Q25460	39	KVDYRPTKSYPPPTYGSKTNYL
3039	Q25460	40	VDYRPTKSYPPPTYGSKTNYLP
3040	Q25460	50	PTYGSKTNYLPLAKKLSSYKP
3041	Q25460	60	PLAKKLSSYKPIKTTYNAKTN
3042	Q25460	72	KTTYNAKTNYPVYKPKMTYP
3043	Q25460	73	TTYNAKTNYPVYKPKMTYPP
3044	Q25460	77	AKTNYPPVYKPKMTYPPTYKP
3045	Q25460	82	PPVYKPKMTYPPTYKPKPSYP
3046	Q25460	83	PVYKPKMTYPPTYKPKPSYPP
3047	Q25460	87	PKMTYPPTYKPKPSYPPTYKS
3048	Q25460	92	PPTYKPKPSYPPTYKSKPTYK
3049	Q25460	99	PSYPPTYKSKPTYKPKITYPP
3050	Q25460	103	PTYKSKPTYKPKITYPPPTYKA
3051	Q25460	108	KPTYKPKITYPPPTYKAKPSYP
3052	Q25460	109	PTYKPKITYPPPTYKAKPSYPS

3053	Q25460	118	PPTYKAKPSY P SSYKPKKTYP
3054	Q25460	123	AKPSYPSSYK P KKTYPPTYKP
3055	Q25460	128	PSSYKPKKTYP P PTYKPKLTYP
3056	Q25460	129	SSYKPKKTYP P TYKPKLTYP
3057	Q25460	133	PKKTYPPTYK P KLTYPPTYKP
3058	Q25460	138	PPTYKPKLTYP P PTYKPKPSYP
3059	Q25460	139	PTYKPKLTYP P TYKPKPSYPP
3060	Q25460	143	PKLTYPPTYK P KPSYPPTYKP
3061	Q25460	148	PPTYKPKPSY P PTYKPKPSYP
3062	Q25460	153	PKPSYPPTYK P KPSYPPSYKT
3063	Q25460	158	PPTYKPKPSY P PSYKTKKTYP
3064	Q25460	168	PPSYKTKKTY P SSYKAKPSYP
3065	Q25460	178	PSSYKAKPSY P PTYKAKPSYP
3066	Q25460	188	PPTYKAKPSY P PTYKAKPSYP
3067	Q25460	198	PPTYKAKPSY P PTYKAKPTYK
3068	Q25460	205	PSYPPTYKAK P TYKAKPTYPS
3069	Q25460	214	KPTYKAKPTY P STYKAKPSYP
3070	Q25460	224	PSTYKAKPSY P PTYKAKPTYK
3071	Q25460	231	PSYPPTYKAK P TYKAKPSYPP
3072	Q25460	240	KPTYKAKPSY P PTYKAKPSYP
3073	Q25460	267	PSYPPTYKAK P TYKAKPTYKA
3074	Q25460	273	YKAKPTYKAK P TYKAKPTYKA
3075	Q25460	279	YKAKPTYKAK P TYKAKPSYPP
3076	Q25460	364	PSTYKAKPSY P PTYKAKPSYP
3077	Q25460	436	PSTYKAKPSY P PSYKAKPSYP
3078	Q25460	446	PPSYKAKPSY P PTYKAKPTYK
3079	Q25460	472	PSTYKAKPSY P ASYKAKPSYP
3080	Q25460	482	PASYKAKPSY P PTYKSKSSYP
3081	Q25460	492	PPTYKSKSSY P SSYKPKKTYP
3082	Q25460	497	SKSSYPSSYK P KKTYPPTYKP
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3085	Q25460	507	PKKTYPPTYK P KLTYPPTYKP
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3087	Q25460	517	PKLTYPPTYK P KPSYPPSYKP
3088	Q25460	522	KPTYKPKPSY P PSYKPKTTYP
3089	Q25460	527	PKPSYPPSYK P KTTYPPTYKP
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3092	Q25460	537	PKTTYPTYK P KISYPPTYKA
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3094	Q25460	552	PPTYKAKPSY P ATYKAKPSYP
3095	Q25460	562	PATYKAKPSY P PTYKAKPSYP
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3099	Q25460	628	PPTYKAKPSY P PPTYKAKPTYP
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3101	Q25460	648	PSTYKAKPSY P PPTYKPKISYP
3102	Q25460	653	AKPSYPPTYK P KISYPPTYKA
3103	Q25460	685	PSYPPTYKAK P TYKAKPTNPS
3104	Q25460	691	YKAKPTYKAK P TNPSTYKAKP
3105	Q25460	694	KPTYKAKPTN P STYKAKPSYP
3106	Q25460	740	KPTYKAKPTY P STYKAKPTYK
3107	Q25460	747	PTYPSSTYKAK P TYKAKPTYPP
3108	Q25460	756	KPTYKAKPTY P PPTYKAKPSYP
3109	Q25460	766	PPTYKAKPSY P PPTYKPKPSYP
3110	Q25460	771	AKPSYPPTYK P KPSYPPTYKS
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3112	Q25460	786	PPTYKSKSIY P SSYKPKKTYP
3113	Q25460	791	SKSIYPSSYK P PKKTYPPTYKP
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3115	Q25460	816	PPTYKPKPSY P PSYKPKITYP
3116	Q25460	821	PKPSYPPSYK P KITYPSTYKL
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3118	Q25460	836	PSTYKLKPSY P PPTYKSKTSYP
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3121	Q25460	856	PPTYNKKISY P SSYKAKTSYP
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3125	Q2I2Q5	27	LTTLELDTDR P VERHAAIKQD
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3127	Q2I2Q5	51	QERRGIRLHA P RDECCEPQWC
3128	Q3Y5Z3	14	QGALLLLLL P SHGEDNMEDP
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3131	Q3Y5Z3	27	GEDNMEDPPL P PKGACAGWMAG
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3133	Q3Y5Z3	66	TPGEKGEKGD P GLVGPKGDTG
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3135	Q3Y5Z3	90	ITGIEGPRGF P GTPGRKGEPG
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3138	Q3Y5Z3	121	SVGLERQVTV P NPVPIRFTKIF
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3140	Q3Y5Z3	150	GTTGKFLCNI P GLYYFSYHIT

3141	Q4ZJN1	91	RVEAKGIKGD P GSRGSPGKHG
3142	Q4ZJN1	97	IKGDPGSRGS P GKHGPKGSIG
3143	Q4ZJN1	102	GSRGSPGKHG P KGSIGPTGEQ
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3145	Q4ZJN1	120	GEQGLPGETG P QQKGDKEV
3146	Q4ZJN1	132	GQKGDKEVG P TGPEGLMGST
3147	Q4ZJN1	135	GDKGEVGPTG P EGLMGSTGPL
3148	Q4ZJN1	144	GPEGLMGSTG P LGPKGLPGPM
3149	Q4ZJN1	147	GLMGSTGPLG P KGLPGPMGPI
3150	Q4ZJN1	153	GPLGPKGLPG P MGPIGKPGPR
3151	Q4ZJN1	156	GPKGLPGPMG P IGKPGPRGEA
3152	Q4ZJN1	162	GPMGPIGKPG P RGEAGPMGPQ
3153	Q4ZJN1	168	GKPGPRGEAG P MGPPQGEVGR
3154	Q4ZJN1	171	GPRGEAGPMG P QGEVGRGMR
3155	Q4ZJN1	197	RGEKGVGEA P LVPKSAFTVG
3156	Q4ZJN1	200	KGKVGAEAP P LVPKSAFTVGLTV
3157	Q4ZJN1	215	TVGLTVISK F P PPDAPIKFDK
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3160	Q4ZJN1	220	VISK F P PPDA P IKFDKILYNE
3161	Q60994	14	LQALLFLLIL P SHAEDDVTTT
3162	Q60994	29	DDVTTTEELA P ALVPPPKGTC
3163	Q60994	33	TTEELAPALV P PPKGTCAGWM
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3166	Q60994	65	TPGRDGRDGT P GEKGEKGDAG
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3177	Q6PSU2	78	SQDPYSPSQD P DRRDPYSPSP
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3179	Q6PSU2	88	PDRRDPYSP P YDRRGAGSSQ
3180	Q6PSU2	149	QQFKRELRLN L P QQCGLRAPQR
3181	Q6PSU2	157	NLPQQCGLRA P QRCDLEVESG
3182	Q7XAD0	78	IVNGRHDSVL P PPSPKTDPII
3183	Q7XAD0	86	VLPPSPKTD P IIGQLTTITT
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3185	Q7XAD0	107	TPHHDDTVAAP P VGGRHDYVA
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3187	Q7XAD0	124	DYVASPPPPK P QDEQRQIIIT
3188	Q7XAD0	141	IIITSSSSTL P LQASYSAQL
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3198	Q8LG54	42	VTTPPPVAT P PAATPAPT
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3206	Q8LG54	64	PAVSPAPT S SPSSAPSPSSD
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3214	Q8LG54	86	PTASPPA E GPGVSPGELAPT
3215	Q8LG54	90	PPA E GPGVSPGELAPTSDA
3216	Q8LG54	95	GPGVSPG E LAPTSDASAPPP
3217	Q8LG54	97	GVSPG E LAPTSDASAPPPNA
3218	Q8LG54	103	LAPT P SDASAPPPNAALTNKA
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3220	Q8LG54	105	PT P SDASAPPPNAALTNKAFV
3221	Q93WP7	13	ALFLIYLIL S PFRAVSRTLLE
3222	Q93WP7	41	GSGYGRGT N LPPSPASSPPS
3223	Q93WP7	60	PSKEVSNSV S PTRTDEKTSN
3224	Q93WP7	89	AQGENSNQ L FFLTSSDNYQL
3225	Q93WP7	112	FKKLSISY L LVSYVWKLIS
3226	Q93WP7	146	SSDEKYWNR K PLSPSPKPAD
3227	Q93WP7	154	RKPLSP P SPKPADGHRPLQSY
3228	Q93WP7	160	PSPK P ADGHRPLQSYSQLPR

3229	Q93WP8	13	VLFLIYLILS P FGAEARTLLE
3230	Q93WP8	41	GSGYGRGANL P PPSPASSPPS
3231	Q93WP8	91	GENINQLFSF P TSADNYYQLA
3232	Q93WP8	113	FKKLFISYLL P VSYVWNLIGS
3233	Q93WP8	147	KSDERYWNRK P LSPPSPKPAD
3234	Q93WP8	155	RKPLSPPSPK P ADGQRPLHSY
3235	Q93WP8	161	PSPKPADGQR P LHSYYSHLPR
3236	Q941C7	25	LTITSSLARN P VSVSGGFENS
3237	Q941C7	52	LMVNVEDYGD P SANPKHDPGV
3238	Q941C7	56	VEDYGDPSAN P KHDPGVPPSA
3239	Q941C7	60	GDPSANPKHD P GVPPSATGQR
3240	Q9BPB1	26	STQALFQEK R PMKKIDFLSKG
3241	Q9BPB2	26	STQAVLQEK R PKEKIKFLSKR
3242	Q9BPG6	31	DARTKTDDDV P LSPLRDNLKR
3243	Q9BPG6	34	TKTDDDVPLS P LRDNLKRTIR
3244	Q9BPJ7	16	ALLIICLLLF P LTAVPMDGDQ
3245	Q9BPJ7	21	CLLLFPLTAV P MDGDQPADRP
3246	Q9BPJ7	27	LTAVPMDGDQ P ADRPAERMQD
3247	Q9BPJ7	31	PMDGDQPADR P AERMQDDISF
3248	Q9BPJ7	45	MQDDISFEQH P MFDATRRCCN
3249	Q9C5S0	34	TSPPTATPAP P TPTTPPPAAT
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3251	Q9C5S0	39	ATPAPPTPTT P PPAATPPPVS
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3253	Q9C5S0	41	PAPPTPTTTP P PAATPPPVSA
3254	Q9C5S0	45	TPTTTPPAAT P PPVSAPPPVT
3255	Q9C5S0	46	PTTTPPAAT P PPVSAPPPVTT
3256	Q9C5S0	47	TTTPPAAT P PPVSAPPPVTTS
3257	Q9C5S0	51	PAATPPPVSA P PPVTTSPPPVS
3258	Q9C5S0	52	AATPPPVSA P PPVTTSPPPVT
3259	Q9C5S0	53	ATPPPVSA P PPVTTSPPPVT
3260	Q9C5S0	58	VSAPPPVTTS P PPVTTAPPPA
3261	Q9C5S0	59	SAPPPVTTS P PPVTTAPPPAN
3262	Q9C5S0	60	APPPVTTS P PPVTTAPPPANP
3263	Q9C5S0	65	TTSPPPVTTA P PPANPPPPVS
3264	Q9C5S0	66	TSPPPVTTAP P PANPPPPVSS
3265	Q9C5S0	67	SPPPVTTAPP P ANPPPPVSSP
3266	Q9C5S0	70	PVTTAPPPAN P PPPVSSPPPA
3267	Q9C5S0	71	VTTAPPPAN P PPPVSSPPPAS
3268	Q9C5S0	72	TTAPPPAN P PPVSSPPPASP
3269	Q9C5S0	73	TAPPPAN P PPVSSPPPASPP
3270	Q9C5S0	77	PANPPPPVSS P PPASPPPATP
3271	Q9C5S0	78	ANPPPPVSS P PPASPPPATPP
3272	Q9C5S0	79	NPPPPVSS P PASPPPATPPP

3273	Q9C5S0	82	PPVSSPPPPAS P PPATPPPVAS
3274	Q9C5S0	83	PVSSPPPPAS P PPATPPFVASP
3275	Q9C5S0	84	VSSPPPPAS P PPATPPPVASPP
3276	Q9C5S0	87	PPPASPPPPAT P PPVASPPPPV
3277	Q9C5S0	88	PPASPPPPAT P PPVASPPPPVA
3278	Q9C5S0	89	PASPPPPAT P PPVASPPPPVAS
3279	Q9C5S0	93	PPATPPPVAS P PPPPVASPPPA
3280	Q9C5S0	94	PATPPPVAS P PPPPVASPPPAT
3281	Q9C5S0	95	ATPPPVAS P PPVASPPPPATP
3282	Q9C5S0	96	TPPPVAS P PPVASPPPPATPP
3283	Q9C5S0	100	VASPPPPVAS P PPATPPPVPAT
3284	Q9C5S0	101	ASPPPPVAS P PPATPPPVPATP
3285	Q9C5S0	102	SPPPPVAS P PPATPPPVPATPP
3286	Q9C5S0	105	PPVASPPPPAT P PPVPATPPPAP
3287	Q9C5S0	106	PVASPPPPAT P PPVPATPPPAPL
3288	Q9C5S0	107	VASPPPPAT P PPVPATPPPAPLA
3289	Q9C5S0	111	PPATPPPVPAT P PPAPLASPPA
3290	Q9C5S0	112	PATPPPVPAT P PPAPLASPPAQ
3291	Q9C5S0	113	ATPPPVPAT P PPAPLASPPAQV
3292	Q9C5S0	115	PPPVATPPPA P PLASPPAQVPA
3293	Q9C5S0	119	ATPPPAPLAS P PAQVPAPAPT
3294	Q9C5S0	120	TPPPAPLAS P PAQVPAPAPTT
3295	Q9C5S0	124	APLASPPAQV P APAPTTKPDS
3296	Q9C5S0	126	LASPPAQVPA P APTTKPDS
3297	Q9C5S0	128	SPPAQVPAP P TTKPDS
3298	Q9C5S0	132	QVPAPAPTT P DS
3299	Q9C5S0	135	APAPTTKPDS P SPSSSPPL
3300	Q9C5S0	137	APTTPKPDSPS P SPSSSPPLPS
3301	Q9C5S0	139	TTKPDSPSPS P SSSPPLPSSD
3302	Q9C5S0	143	DSPSPSPSSS P PPLPSSDAPGP
3303	Q9C5S0	144	SPSPSPSSS P LPSSDAPGPS
3304	Q9C5S0	146	SPSPSSSPPL P SSDAPGPSTD
3305	Q9C5S0	151	SSPPLPSSDA P GPSTD
3306	Q9C5S0	153	PPLPSSDAPG P STD
3307	Q9C5S0	160	APGPSTD P SPSPTDVNDQ
3308	Q9C5S0	162	GPSTD P SPSPTDVNDQNG
3309	Q9C5S0	164	STD P SPSPTDVNDQNGAS
3310	Q9LJD9	45	SPTSDAAMF V ALFASVAALA
3311	Q9LVC0	45	SPTSDASSF I PTFFASVAVMA
3312	Q9M0S4	34	PGPAPTRS P LSPAQPRTAA
3313	Q9M0S4	39	TRSPLPS P QAQPRTAAPT
3314	Q9M0S4	40	RSPLPS P QAQPRTAAPT
3315	Q9M0S4	45	SPAQPRTAA P TPSITPTPTP
3316	Q9M0S4	47	AQPRTAA P TPSITPTPTPTP

3317	Q9M0S4	51	RTAAPTPTSIT P TPTPTPSATP
3318	Q9M0S4	53	AAPTPTSITPT P TPTPSATPTA
3319	Q9M0S4	55	PTPSITPTPT P TPTSATPTAAP
3320	Q9M0S4	57	PSITPTPTPT P SATPTAAPVS
3321	Q9M0S4	61	PTPTPTPSAT P TAAPVSPAG
3322	Q9M0S4	65	PTPSATPTAA P VSPAGSPLP
3323	Q9M0S4	68	SATPTAAPVS P PAGSPLPSSA
3324	Q9M0S4	69	ATPTAAPVSP P PAGSPLPSSAS
3325	Q9M0S4	73	AAPVSPAGS P LPSSASPPAP
3326	Q9M0S4	75	PVSPAGSPL P SSASPPAPPT
3327	Q9M0S4	80	AGSPLPSSAS P PAPPTSLTPD
3328	Q9M0S4	81	GSPLPSSAS P PAPPTSLTPDG
3329	Q9M0S4	83	PLPSSASPPA P PPTSLTPDGAP
3330	Q9M0S4	84	LPSSASPPAP P TSLTPDGAPV
3331	Q9M0S4	89	SPPAPPTSLT P DGAPVAGPTG
3332	Q9M0S4	93	PPTSLTPDG P VAGPTGSTPV
3333	Q9M0S4	97	LTPDGAPVAG P TGSTPVDNNN
3334	Q9M0S4	102	APVAGPTGST P VDNNAATLA
3335	Q9SJY7	33	APAPAPTTVT P PPPTALPPVTA
3336	Q9SJY7	39	TTVT P PPPTAL P PVTAETPSPI
3337	Q9SJY7	40	TVTP P PPPTAL P VTAETPSPIA
3338	Q9SJY7	46	TALPPVTAET P SPIASPPVPV
3339	Q9SJY7	48	LPPVTAETPS P IASPPVPVNE
3340	Q9SJY7	52	TAETPSPIAS P PVPVNEPTPA
3341	Q9SJY7	53	AETPSPIAS P PVPVNEPTPAP
3342	Q9SJY7	55	TPSPIASPPV P VNEPTPAPTT
3343	Q9SJY7	59	IASPPVPVNE P TPAPTTSTPTT
3344	Q9SJY7	61	SPPVPVNEPT P APTTSTPTTSP
3345	Q9SJY7	63	PVPVNEPTPA P TTSTPTTSPVA
3346	Q9SJY7	67	NEPTAPTT P TTSPVASPPQ
3347	Q9SJY7	71	PAPTTSTTT P VASPPQTDAP
3348	Q9SJY7	75	TSPTTSPVAS P PQTDAPAGP
3349	Q9SJY7	76	SPTTSPVAS P QTDAPAGPS
3350	Q9SJY7	81	PVASPPQTD P APGPSAGLTP
3351	Q9SJY7	83	ASPPQTDAP P GPSAGLTPTS
3352	Q9SJY7	85	PPQTDAPAG P SAGLTPTSSP
3353	Q9SJY7	91	PAPGPSAGLT P TSSPAPGPDG
3354	Q9SJY7	95	PSAGLTPTSS P APGPDGAADA
3355	Q9SJY7	97	AGLTPTSSPA P GPDGAADAPS
3356	Q9SJY7	99	LTPTSSPAG P PDGAADAPSAA
3357	Q9SJY7	106	APGPDGAADA P SAWANKAFL
3358	Q9STQ3	44	SPTSDASLAI P AFFASVATLA
3359	Q9U3Z3	23	LVIVFLNLV P TSACRAEGTY
3360	Q9U3Z3	57	WGGCGHPCR H PKRSKLQEFF

3361	Q9UKV8	7	GSYMMYSGAG P ALAPPAPPPP
3362	Q9UKV8	11	MYSGAGPALA P PAPPPPIQGY
3363	Q9UKV8	12	YSGAGPALAP P APPPPIQGYA
3364	Q9UKV8	14	GAGPALAPPA P PPPIQGYAFK
3365	Q9UKV8	15	AGPALAPPAP P PPPIQGYAFKP
3366	Q9UKV8	16	GPALAPPAPP P PIQGYAFKPP
3367	Q9UKV8	17	PALAPPAPPP P IQGYAFKPPP
3368	Q9UKV8	25	PPPIQGYAFK P PPRPDFGTSG
3369	Q9UKV8	26	PPIQGYAFKP P PRPDFGTSGR
3370	Q9UKV8	27	PIQGYAFKPP P RPDFGTSGRT
3371	Q9UKV8	29	QGYAFKPPR P DFGTSGRTIK
3372	Q9UKV8	50	LQANFFEMDI P KIDIYHYELD
3373	Q9UKV8	63	DIYHYELDIK P EKCPRRVNRE
3374	Q9UKV8	67	YELDIKPEK P RRVNREIVEH
3375	Q9UKV8	92	FKTQIFGDRK P VFDGRKNLYT
3376	Q9UKV8	105	DGRKNLYTAM P LPIGRDKVEL
3377	Q9UKV8	107	RKNLYTAMPL P IGRDKVELEV
3378	Q9UKV8	120	RDKVELEVTL P GEGKDRIFKV
3379	Q9UKV8	152	ALHDALSGRL P SVPFETIQAL
3380	Q9UKV8	155	DALSGRLPSV P PFETIQALDVV
3381	Q9UKV8	170	QALDVVMRHL P SMRYTPVGRS
3382	Q9UKV8	176	MRHLPSMRYT P VGRSFFTASE
3383	Q9UKV8	191	FFTASEGCSN P LGGREVWFG
3384	Q9UKV8	208	VWFGFHQSVR P SLWKMMMLNID
3385	Q9UKV8	229	VSATAFYKAQ P VIEFVCEVLD
3386	Q9UKV8	249	DFKSIEEQK P LTDSQRVKFT
3387	Q9UKV8	288	KYRVCNVTRR P ASHQTFPLQQ
3388	Q9UKV8	295	TRRPASHQT P FLQQESGQTVE
3389	Q9UKV8	323	KDRHKLVLRY P HLPCLOVGQE
3390	Q9UKV8	326	HKLVLRYPHL P CLQVGQEQKH
3391	Q9UKV8	340	VGQEQKH P TYLPLEVCNIVAGQ
3392	Q9UKV8	373	TMIRATARS P DRQEEISKLM
3393	Q9UKV8	392	LMRSASFNTD P YVREFGIMVK
3394	Q9UKV8	415	MTDVTGRVLQ P PSILYGGRNK
3395	Q9UKV8	416	TDVTGRVLQ P PSILYGGRNKA
3396	Q9UKV8	430	YGGRNKAIAT P VQGVWDMRNK
3397	Q9UKV8	458	IKVWAIACFA P QRQCTEVHLK
3398	Q9UKV8	484	LRKISRDA P GMP P IQGQPCFCKY
3399	Q9UKV8	489	RDAGMP P IQGQ P CFCKYAQGAD
3400	Q9UKV8	503	KYAQGADSVE P MFRLKNTYA
3401	Q9UKV8	523	AGLQLVVVIL P PKTPVYAEVK
3402	Q9UKV8	527	LVVVILPGKT P VYAEVKRVGD
3403	Q9UKV8	557	VQMKNVQRTT P QTLNLCCLKI
3404	Q9UKV8	580	KLGGVNNILL P QGRPPVFQQP

3405	Q9UKV8	584	VNNILLPQGR P PVFQQPVIFL
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3407	Q9UKV8	590	PQGRPPVFQQ P VIFLGADVTH
3408	Q9UKV8	601	VIFLGADVTH P PAGDGKKPSI
3409	Q9UKV8	602	IFLGADVTH P PAGDGKKPSIA
3410	Q9UKV8	609	THPPAGDGKK P SIAAVVGSMD
3411	Q9UKV8	622	AAVVGSMDAH P NRYCATVRVQ
3412	Q9UKV8	661	IQFYKSTRFK P TRIIFYRDGV
3413	Q9UKV8	731	NERVGKSGNI P AGTTVDTKIT
3414	Q9UKV8	743	GTTVDTKITH P TEFDFYLCSH
3415	Q9UKV8	762	SHAGIQGTSR P SHYHVLWDDN
3416	Q9UKV8	800	YVRCTRSVSI P APAYY AHLVA
3417	Q9UKV8	802	RCTRSVSI P APAYY AHLVAFR
3418	Q9Y2N7	42	EVLYQLAHTL P FARGVSAHLD
3419	Q9Y2N7	84	EWNQVGAGGE P LDACYLKALE
3420	Q9Y2N7	135	IGHSIFDFIH P CDQEELQDAL
3421	Q9Y2N7	147	DQEELQDAL T PQQTLSRRKVE
3422	Q9Y2N7	159	QTLSRRKVE A PTERCFSLRMK
3423	Q9Y2N7	200	NCSGHMRAYK P PAQTSPAGSP
3424	Q9Y2N7	201	CSGHMRAYK P PAQTSPAGSPD
3425	Q9Y2N7	206	RAYKPPAQTS P AGSPDSEPPL
3426	Q9Y2N7	210	PPAQTS P AGSPDSEPPLQCLV
3427	Q9Y2N7	214	TSPAGSPDSE P PPLQCLVLICE
3428	Q9Y2N7	215	SPAGSPDSEP P LQCLVLICEA
3429	Q9Y2N7	227	QCLVLICEAI P HPGSLEPPLG
3430	Q9Y2N7	229	LVLICEAI P HPGSLEPPLGRG
3431	Q9Y2N7	234	EAIHPGSLE P PPLGRGAFLSR
3432	Q9Y2N7	235	AIPHPGSLE P PLGRGAFLSRH
3433	Q9Y2N7	266	DRIAEVAGYS P DDLIGCSAYE
3434	Q9Y2N7	329	QATVVSGGRG P QSESIVCVHF
3435	Q9Y2N7	363	LEQTEQHSRR P IQRGAPSQKD
3436	Q9Y2N7	369	HSRRPIQRGA P SQKDTNPNGD
3437	Q9Y2N7	375	QRGAPSQKDT P NPGDSLDTPG
3438	Q9Y2N7	377	GAPSQKDT P NPNGDSLDTPGPR
3439	Q9Y2N7	384	TPNPNGDSLDT P GPRILAFLHP
3440	Q9Y2N7	386	NPNGLSLDT P PRILAFLHPPS
3441	Q9Y2N7	394	PGPRILAFLH P PSLSEAALAA
3442	Q9Y2N7	395	GPRILAFLHP P SLSEAALAAD
3443	Q9Y2N7	406	SLSEAALAAD P RRFCSPDLRR
3444	Q9Y2N7	412	LAADPRRFC P DLRRLGPIIL
3445	Q9Y2N7	420	CSPDLRRLG P ILDGASVAAT
3446	Q9Y2N7	431	ILDGASVAAT P STPLATRHPQ
3447	Q9Y2N7	434	GASVAAT P STPLATRHPQSPL
3448	Q9Y2N7	440	TPSTPLATRH P QSPLSADLPD

3449	Q9Y2N7	443	TPLATRHPQS P LSADLPDELP
3450	Q9Y2N7	449	HPQSPLSADL P DELPGVTENV
3451	Q9Y2N7	453	PLSADLPDEL P VGTENVHRLF
3452	Q9Y2N7	509	DFQLNASEQL P RAYHRPLGAV
3453	Q9Y2N7	515	SEQLPRAYHR P LGAVPRPRAR
3454	Q9Y2N7	520	RAYHRPLGAV P RPRARSFHGL
3455	Q9Y2N7	522	YHRPLGAVPR P RARSFHGLSP
3456	Q9Y2N7	532	PRARSFHGLS P PALEPSLLPR
3457	Q9Y2N7	533	RARSFHGLSP P ALEPSLLPRW
3458	Q9Y2N7	537	FHGLSPPALE P SLLPRWGSDP
3459	Q9Y2N7	541	SPPALEPSLL P RWGSDPRLSC
3460	Q9Y2N7	547	PSLLPRWGSD P RLSCSSPSRG
3461	Q9Y2N7	554	GSDPRLSCSS P SRGDPSASSP
3462	Q9Y2N7	559	LSCSSPSRGD P SASSPMAGAR
3463	Q9Y2N7	564	PSRGDPSASS P MAGARKRTLA
3464	Q9Y2N7	591	DEGVELLGVR P PKRSPSPEHE
3465	Q9Y2N7	592	EGVELLLGVR P PKRSPSPEHEN
3466	Q9Y2N7	596	LLGVRPPKRS P SPEHENFLLF
3467	Q9Y2N7	598	GVRPPKRS P SEHENFLLFPL
3468	Q9Y2N7	607	SPEHENFLLF P LSLSFLLTGG
3469	Q9Y2N7	618	LSLSFLLTGG P APGSLQDPST
3470	Q9Y2N7	620	LSFLLTGG P APGSLQDPSTPL
3471	Q9Y2N7	626	GGPAPGSLQD P STPLLNLNEP
3472	Q9Y2N7	629	APGSLQDPST P LLNLNEPLGL
3473	Q9Y2N7	636	PSTPLLNLNE P LGLGPSLLSP
3474	Q9Y2N7	641	LNLNEPLGL P SLLSPYSDED
3475	Q9Y2N7	646	PLGLGPSLLS P YSDEDTTQPG
3476	Q9Y2N7	655	SPYSDEDTTQ P GGPFQPRAGS
3477	Q9Y2N7	658	SDEDTTQPG P PFQPRAGSAQA
3478	Q9Y2N7	661	DTTQPG P PFQPRAGSAQADDA
3479	Q9ZT16	43	PPATPPP V AT P PPVATPPPA
3480	Q9ZT16	44	PATPPP V AT P PPVATPPPAAT
3481	Q9ZT16	45	ATPPP V AT P PPVATPPPAATP
3482	Q9ZT16	49	PVATPPP V AT P PPAATPAPAT
3483	Q9ZT16	50	VATPPP V AT P PPAATPAPATP
3484	Q9ZT16	51	ATPPP V AT P PPAATPAPATPP
3485	Q9ZT16	55	PVATPPP A AT P APATPPPAAT
3486	Q9ZT16	57	ATPPP A AT P APATPPPAATPA
3487	Q9ZT16	60	PPAATPAPAT P PPAATPAPAT
3488	Q9ZT16	61	PAATPAPAT P PPAATPAPATT
3489	Q9ZT16	62	AATPAPAT P PPAATPAPATTP
3490	Q9ZT16	66	APATPPP A AT P APATTTPPSVA
3491	Q9ZT16	68	ATPPP A AT P ATTTPPSVAPS
3492	Q9ZT16	72	PAATPAPATT P PSVAPSPADV

3493	Q9ZT16	73	AATPAPATTP P SVAPSPADV
3494	Q9ZT16	77	APATTPPSVA P SPADVPTASP
3495	Q9ZT16	79	ATTPPSVAPS P ADVPTASPPA
3496	Q9ZT16	83	PSVAPSPADV P TASPPAPEGP
3497	Q9ZT16	87	PSPADVPTAS P PAPEGPTVSP
3498	Q9ZT16	88	SPADVPTASP P PAPEGPTVSPS
3499	Q9ZT16	90	ADVPTASPPA P EGPTVSPSSA
3500	Q9ZT16	93	PTASPPAPEG P TVSPSSAPGP
3501	Q9ZT16	97	PPAPEGPTVS P SSAPGPSDAS
3502	Q9ZT16	101	EGPTVSPSSA P GPSDASPAPS
3503	Q9ZT16	103	PTVSPSSAPG P SDASPAPSAA
3504	Q9ZT16	108	SSAPGPSDAS P APSAAFSNKA
3505	Q9ZT16	110	APGPSDASPA P SAAFSNKAFF