HBV-RYD-7

File name	**HBV-RYD-7.sam**
Ref name	**KX357637.1 Hepatitis B virus isolate MK20ETH, complete genome**
Ref len	**3182**
Program used	**Tanoti Assembler 1.0**
Total reads	**3558086**
Mapped reads	**499650 (14.04%)**
Unmapped reads	**3058436**
Mapped loan pairs	**683**
Average read length	**148nt**
Coverage	**3182nt (100.00%)**
Average depth	**23152 reads/site**
Average insert length	**159nt**

COVERAGE

Coverage by reads

## SHANNON ENTROPY

Entropy of the reads
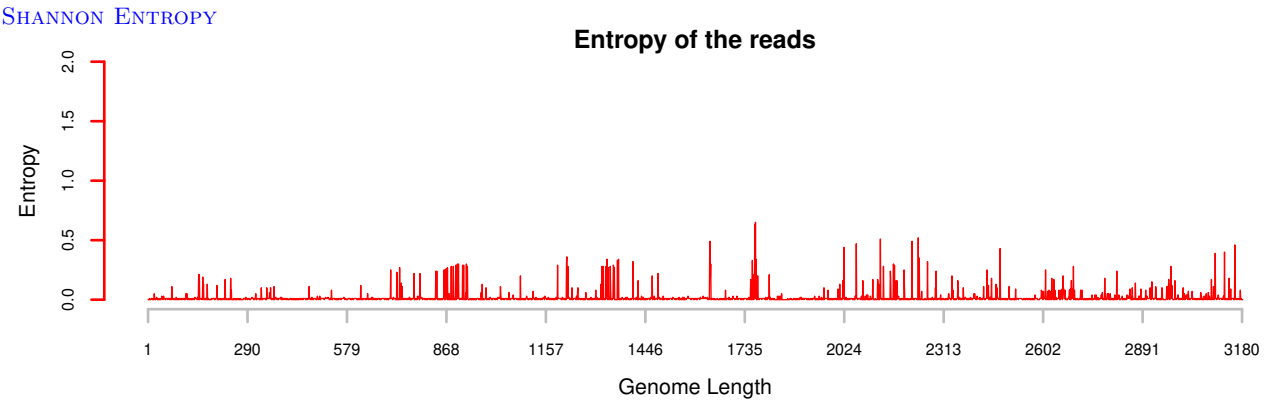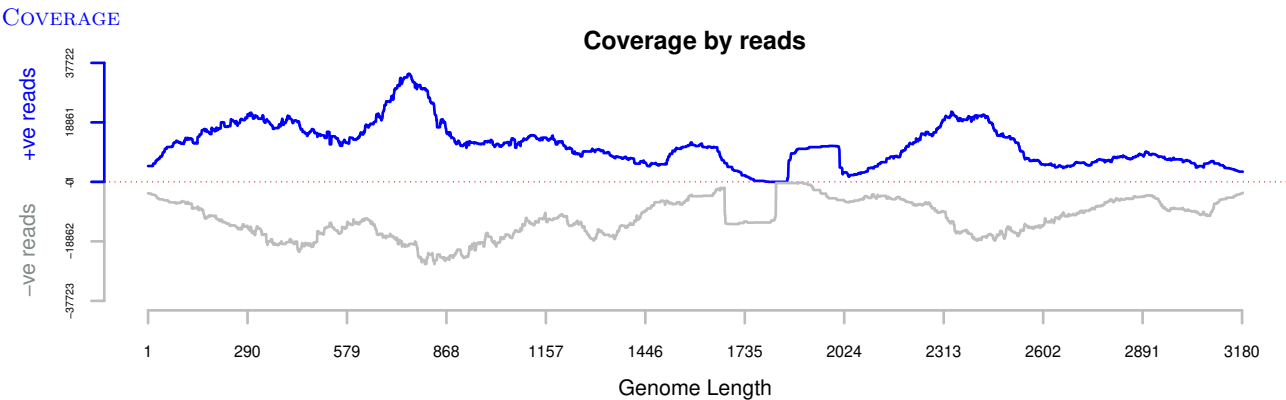
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   1        CTCCACAACT TTCCACCAAA CTCTGCAAGA TCCCAGAGTG CGAGGCCTGT ATTTCCCTGC TGGTGGCTCC
  70        AGTTCAGGAA CAGTAAACCC TGTTCCGACT ACTGTCTCTC CCATATCGTC AATCTTCTCG AGGATTGGGG
 140        ACCCTGCGCT GAACATGGAG AACATCACAT CAGGATTCCT AGGACCCCTG CTCGTGTTAC AGGCGGGGTT
 210        TTTCTTGTTG ACAAGAATCC TCACAATACC GCAGAGTCTA GACTCGTGGT GGACTTCTCT CAATTTTCTA
 280        GGGGGAACTA CCGTGTGTCT TGGCCAAAAT TCGCAGTCCC CAACCTCCAA TCACTCACCA ACCTCCTGTC
 350        CTCCAACTTG TCCTGGTTAT CGCTGGATGT GTCTGCGGCG TTTTATCATC TTCCTCTTCA TCCTGCTGCT
 420        ATGCCTCATC TTCTTGTTGG TTCTTCTGGA CTATCAAGGT ATGTTGCCCG TTTGTCCTCT AATTCCAGGA
 490        TCTTCAACCA CCAGCACGGG ACCATGCAGG ACCTGCACAA CTCCTGCTCA AGGAACCTCT ATGTATCCCT
 560        CCTGCTGCTG TACCAAACCT TCGGACGGAA ATTGCACCTG TATTCCCATC CCATCATCCT GGGCTTTCGG
 630        AAAATTCCTA TGGGAGTGGG CCTCAGCCCG TTTCTCCTGG CTCAGTTTAC TAGTGCCATT TGTTCAGTGG
 700        TTCGTAGGGC TTTCCCCCAC TGTTTGGCTT TTAGTTATAT GGATGATGTG GTATTGGGGG CCAAGTCTGT
 770        ACAGCATCTT GAGTCCCTTT TTACCGCTGT TACCAATTTT CTTTTGTCTT TGGGTATACA TTTAAACCCT
 840        AACAAAACAA AAAGATGGGG TTACTCTTTA CATTTCATGG GCTATGTCAT TGGATGTTAT GGGTCATTGC
 910        CACAAGATCA CATCATACAG AAAATCAAAG AATGTTTTAG AAAACTTCCT GTTAACAGAC CTATTGATTG
 980        GAAAGTCTGT CAACGTATTG TGGGTCTTTT GGGTTTTGCT GCCCCTTTTA CACAATGTGG TTATCCTGCT
1050        TTAATGCCCT TGTATGCATG CATTCAATCT AAACAGGCTT TCACTTTCTC GCCAACTTAC AAGGCCTTTC
1120        TGTGTAAACA ATACCTGAAC CTTTACCCCG TTGCCCGGCA ACGGCCAGGT CTGTGCCAAG TGTTTGCTGA
1190        CGCAACCCCC ACTGGCTGGG GCTTGGTTAT GGGCCATCAG CGCATGCGTG GAACCTTTTT GGCTCCTCTG
1260        CCGATCCATA CTGCGGAACT CCTAGCCGCT TGTTTTGCTC GCAGCAGGTC TGGAGCGAAC ATTCTCGGGA
1330        CGGACAACTC TGTTGTTCTC TCCCGCAAAT ATACTTCGTT TCCATGGCTG CTAGGCTGTG CTGCCAACTG
1400        GATCCTGCGC GGGACGTCCT TTGTTTACGT CCCGTCGGCG CTGAATCCCG CGGACGACCC TTCTCGGGGC
1470        CGCTTGGGAC TCTCTCGTCC CCTTCTCTGT CTGCCGTTTC GACCGACCAC GGGGCGCACC TCTCTTTACG
1540        CGGACTCCCC GTCTGTGCCT TCTCATCTGC CGGACCGTGT GCACTTCGCT TCACCTCTGC ACGTCGCATG
1610        GAGACCACCG TGAACGCCCA CCAATTCTTG CCCAAGGTCT TACATAAGAG GACTCTTGGA CTCTCTGTAA
1680        TGTCAACGAC CGACCTTGAG GCATACTTCA AAGACTGTTT GTTTAAAGAC TGGGAGGAGT TGGGGGAGGA
1750        GATTAGATTA AAGTTGTTTG TATTAGGAGG CTGTAGGCAT AAATTGGTCT GCGCACCAGC ACCATGCAAC
1820        TTTTTCACCT CTGCCTAATC ATCTCTTGTT CATGTCCTAC TGTTCAAGCC TCCAAGCTGT GCCTTGGGTG
1890        GCTTTGGGAC ATGGACATTG ATCCGTATAA AGAATTTGGA GCTACTGTGG AGTTACTCTC TTTTTTGCCT
1960        TCTGACTTCT TTCCTTCAGT ACGAGATCTT CTAGATACCG CCTCAGCTCT ATATCGGGAA GCATTAGAGT
2030        CTCCTGAGCA TTGTTCACCT CACCATACGG CACTCAGGCA AGCAATTCTT TGCTGGGGGG AACTAATGAC
2100        TCTAGCCACC TGGGTGGGTG GTAATTTGCA AGATCCAACA TCCAGGGACC TAGTAGTCAG TTATGTTAAC
2170        ACTAATATGG GCCTAAAGTT CAGGCAACTA TTGTGGTTTC ACATTTCTTG CCTCACTTTT GGAAGAGATA
2240        CGGTCATAGA GTATTTGGTG TCTTTCGGAG TGTGGATTCG CACTCCTCCA GCTTATAGAC CACCAAATGC
2310        CCCTATCTTA TCAACACTTC CGGAGACTAC TGTTGTTAGA CGACGAGGCA GGTCCCCTAG AAGAAGAACT
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2450        AGTATTCCTT GGACTCATAA GGTGGGCAAC TTTACGGGGC TTTATTCTTC TACTGTTCCT GTCTTTAACC
2520        CTCATTGGAA AACACCCTCT TTTCCTAATA TACATTTACA CCAAGACATT ATCAAAAAAT GTGAACAATT
2590        TGTAGGCCCA CTCACAGTTA ATGAGAAAAG AAGACTACAA TTAATTATGC CTGCTAGGTT TTATCCAAAT
2660        GTTACCAAAT ATTTGCCATT GGATAAGGGC ATTAAACCTT ATTATCCAGA ACATCTAGTT AATCATTACT
2730        TCCAAACCAG ACATTATTTA CACACTCTAT GGAAGGCGGG TATATTATAT CAGAGAGAAA CAACACGTAG
2800        CGCCTCATTT TGTGGATCAC CATATTCTTG GGAACAAGAG CTACAGCATG GGGCAGAATC TTTCCACCAG
2870        CAATCCTCTG GGATTCTTTC CCGACCACCA GTTGGATCCA GCCTTCAGAG CAAACACCGC AAATCCAGAT
2940        TGGGACTTCA ATCCCAACAA GGACACCTGG CCGGACGCCA ACAAGGTAGG AGCTGGAGCA TTCGGGCTGG
3010        GATTCACCCC ACCGCACGGA GGCCTTTTGG GGTGGAGCCC TCAGGCTCAG GGCATACTAC AAAACCTTGCC
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3150        AGAAACACCC ATCCTCAGGC CATGCAGTGG AA
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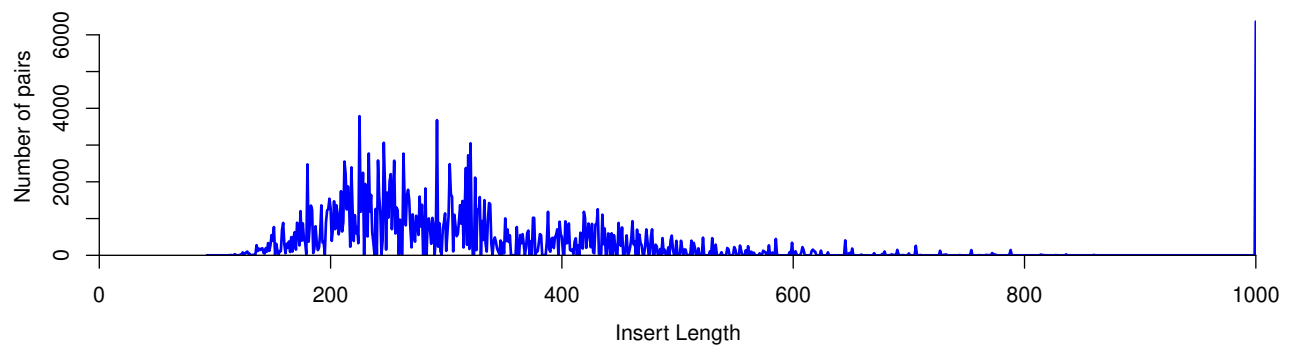
Genome Composition	
A	728 (22.88%)
T	906 (28.47%)
G	687 (21.59%)
C	861 (27.06%)
N	0 (0.00%)
Total Nucleotides	3182
GC%	48.65

Read quality

4
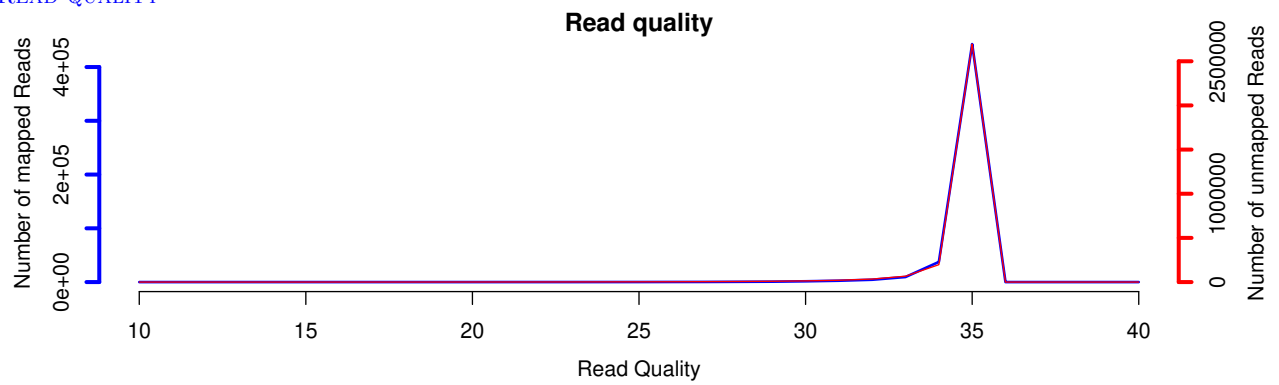
Amino acid variations

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::99.95(8742)
P2	2	F	N	N::99.93(8754)
P2	4	F	P	P::99.93(9090)
P2	5	F	P	P::99.95(9855)
P2	6	F	N	N::99.46(9910)
P2	7	F	S	S::99.96(10114)
P2	8	F	A	A::99.79(11227)
P2	9	F	R	R::99.92(12182)
P2	10	F	S	S::99.96(12218)
P2	11	F	Q	Q::99.86(12924)
P2	12	F	S	S::99.92(13566)
P2	13	F	A	A::99.76(13545)
P2	14	F	R	R::99.92(14128)
P2	15	F	P	P::99.64(15030)
P2	16	F	V	V::99.88(15460)
P2	18	F	P	P::99.93(16335)
P2	19	F	C	C::99.91(16919)
P2	20	F	W	W::99.86(17141)
P2	21	F	W	W::99.82(17483)
P2	22	F	L	L::99.91(17550)
P2	23	F	Q	Q::98.54(17338)
P2	25	F	R	R::99.87(18730)
P2	26	F	N	N::99.96(19027)
P2	27	F	S	S::99.76(19090)
P2	28	F	K	K::99.92(19380)
P2	29	F	P	P::99.96(19054)
P2	30	F	C	C::99.83(18822)
P2	31	F	S	S::99.97(18738)
P2	32	F	D	D::99.85(18058)
P2	33	F	Y	Y::99.89(18275)
P2	34	F	C	C::99.85(18263)
P2	35	F	L	L::99.93(19073)
P2	36	F	S	S::99.90(19595)
P2	37	F	H	H::99.90(20336)
P2	38	F	I	I::99.97(19390)
P2	39	F	V	V::99.83(20294)
P2	40	F	N	N::99.92(20344)
P2	41	F	L	L::99.94(20657)
P2	42	F	L	L::99.95(20405)
P2	43	F	E	E::99.89(20773)
P2	44	F	D	D::99.88(20119)
P2	45	F	W	W::99.82(20450)
P2	46	F	G	G::99.89(20507)
P2	47	F	P	P::99.91(19993)
P2	48	F	C	C::99.87(22018)
P2	49	F	A	A::96.76(22315)

P2	50	F	E	E::99.89(23548)
P2	51	F	H	H::99.90(23455)
P2	52	F	G	G::99.90(25050)
P2	53	F	E	E::96.98(24609)
P2	54	F	H	H::99.93(26663)
P2	55	F	H	H::99.89(27588)
P2	56	F	I	I::99.90(27968)
P2	57	F	R	R::98.20(26575)
P2	58	F	I	I::99.91(26712)
P2	59	F	P	P::99.95(26169)
P2	60	F	R	R::99.93(25515)
P2	61	F	T	T::99.95(25691)
P2	62	F	P	P::99.90(26862)
P2	63	F	A	A::99.88(27538)
P2	64	F	R	R::99.94(26866)
P2	65	F	V	V::99.93(26714)
P2	66	F	T	T::99.91(27129)
P2	67	F	G	G::99.96(28266)
P2	68	F	G	G::99.94(28204)
P2	69	F	V	V::99.94(29056)
P2	71	F	L	L::99.94(30878)
P2	72	F	V	V::99.95(31657)
P2	73	F	D	D::99.88(31537)
P2	74	F	K	K::99.91(30194)
P2	75	F	N	N::99.90(30460)
P2	76	F	P	P::99.96(30665)
P2	77	F	H	H::99.92(30093)
P2	78	F	N	N::99.92(30874)
P2	79	F	T	T::99.93(31439)
P2	80	F	A	A::96.97(31381)
P2	81	F	E	E::99.96(33341)
P2	82	F	S	S::99.95(33026)
P2	83	F	R	R::99.92(32766)
P2	84	F	L	L::99.94(32330)
P2	85	F	V	V::99.94(32515)
P2	86	F	V	V::99.94(31650)
P2	87	F	D	D::99.93(33409)
P2	89	F	S	S::99.93(33069)
P2	90	F	Q	Q::99.96(34839)
P2	92	F	S	S::99.95(33051)
P2	93	F	R	R::99.89(33637)
P2	94	F	G	G::99.93(33603)
P2	95	F	N	N::99.89(34141)
P2	96	F	Y	Y::99.92(33733)
P2	97	F	R	R::99.85(35493)
P2	98	F	V	V::99.92(35719)
P2	99	F	S	S::99.94(35160)
P2	100	F	W	W::99.76(36085)
P2	101	F	P	P::99.76(36113)
P2	102	F	K	K::99.92(35520)
P2	104	F	A	A::99.31(35511)

P2	105	F	V	V::99.94(34864)
P2	106	F	P	P::99.87(34229)
P2	107	F	N	N::99.92(34768)
P2	108	F	L	L::99.86(34710)
P2	109	F	Q	Q::99.89(34841)
P2	110	F	S	S::99.92(35135)
P2	111	F	L	L::99.94(37172)
P2	112	F	T	T::99.89(35727)
P2	113	F	N	N::99.89(35386)
P2	114	F	L	L::99.92(35680)
P2	115	F	L	L::99.89(38480)
P2	116	F	S	S::99.91(37272)
P2	117	F	S	S::99.90(37726)
P2	118	F	N	N::99.92(37215)
P2	119	F	L	L::99.92(36050)
P2	120	F	S	S::99.91(35706)
P2	121	F	W	W::99.91(35816)
P2	122	F	L	L::99.92(36172)
P2	123	F	S	S::99.92(36758)
P2	124	F	L	L::99.92(36774)
P2	125	F	D	D::99.83(36809)
P2	126	F	V	V::99.94(36840)
P2	127	F	S	S::99.87(37053)
P2	128	F	A	A::99.77(36975)
P2	129	F	A	A::99.82(37522)
P2	131	F	Y	Y::99.84(37660)
P2	132	F	H	H::99.90(38360)
P2	133	F	L	L::99.92(37980)
P2	134	F	P	P::99.92(38260)
P2	135	F	L	L::99.90(38278)
P2	136	F	H	H::99.94(39631)
P2	137	F	P	P::99.93(38148)
P2	138	F	A	A::99.91(38157)
P2	139	F	A	A::99.91(37776)
P2	140	F	M	M::99.88(37918)
P2	141	F	P	P::99.94(38881)
P2	142	F	H	H::99.91(38254)
P2	143	F	L	L::99.94(38321)
P2	144	F	L	L::99.93(37506)
P2	145	F	V	V::99.94(40470)
P2	146	F	G	G::99.94(39794)
P2	147	F	S	S::99.91(38276)
P2	148	F	S	S::99.92(36852)
P2	149	F	G	G::99.93(34945)
P2	150	F	L	L::99.93(35261)
P2	151	F	S	S::99.90(36211)
P2	152	F	R	R::99.90(34687)
P2	153	F	Y	Y::99.93(34805)
P2	154	F	V	V::99.94(34012)
P2	155	F	A	A::99.85(35305)
P2	156	F	R	R::98.55(34344)

P2	157	F	L	L::99.93(35347)
P2	158	F	S	S::99.93(36086)
P2	159	F	S	S::99.87(36556)
P2	160	F	N	N::99.92(35679)
P2	161	F	S	S::99.90(34528)
P2	162	F	R	R::99.84(34479)
P2	163	F	I	I::99.95(34492)
P2	165	F	N	N::99.89(30933)
P2	166	F	H	H::99.69(31010)
P2	167	F	Q	Q::99.91(30939)
P2	168	F	H	H::99.90(30917)
P2	169	F	G	G::99.88(31233)
P2	170	F	T	T::99.89(29833)
P2	171	F	M	M::99.80(28492)
P2	172	F	Q	Q::99.71(28507)
P2	173	F	D	D::99.86(28141)
P2	174	F	L	L::99.82(30093)
P2	175	F	H	H::99.88(30039)
P2	176	F	N	N::99.90(24860)
P2	177	F	S	S::99.86(24848)
P2	178	F	C	C::99.88(28330)
P2	179	F	S	S::99.88(28832)
P2	180	F	R	R::99.87(28880)
P2	181	F	N	N::99.90(29398)
P2	182	F	L	L::99.90(29125)
P2	183	F	Y	Y::99.91(29038)
P2	184	F	V	V::99.92(28670)
P2	185	F	S	S::99.91(27524)
P2	186	F	L	L::99.92(27451)
P2	187	F	L	L::99.94(27316)
P2	188	F	L	L::99.95(25638)
P2	189	F	L	L::99.94(26602)
P2	190	F	Y	Y::99.87(27496)
P2	191	F	Q	Q::99.90(26838)
P2	192	F	T	T::99.95(25989)
P2	194	F	G	G::99.89(24685)
P2	195	F	R	R::99.85(26415)
P2	196	F	K	K::99.91(27229)
P2	197	F	L	L::99.94(27577)
P2	198	F	H	H::99.82(27241)
P2	199	F	L	L::99.92(25227)
P2	200	F	Y	Y::99.83(26283)
P2	201	F	S	S::99.88(25880)
P2	202	F	H	H::99.93(26439)
P2	203	F	P	P::99.94(27031)
P2	204	F	I	I::99.90(27501)
P2	205	F	I	I::99.92(27219)
P2	206	F	L	L::99.95(27913)
P2	207	F	G	G::99.92(27076)
P2	209	F	R	R::99.88(26486)
P2	210	F	K	K::99.93(27742)

P2	211	F	I	I::99.93(29570)
P2	212	F	P	P::99.91(29613)
P2	213	F	M	M::99.89(29060)
P2	214	F	G	G::99.93(30063)
P2	215	F	V	V::99.93(30271)
P2	216	F	G	G::99.91(31053)
P2	217	F	L	L::99.80(30663)
P2	218	F	S	S::99.85(31873)
P2	219	F	P	P::99.92(32065)
P2	221	F	L	L::99.95(36052)
P2	222	F	L	L::99.95(37274)
P2	223	F	A	A::99.85(37335)
P2	224	F	Q	Q::99.91(36819)
P2	226	F	T	T::99.91(35714)
P2	227	F	S	S::99.87(36688)
P2	228	F	A	A::99.88(39479)
P2	229	F	I	I::99.93(41497)
P2	230	F	C	C::99.89(40717)
P2	231	F	S	S::99.94(42634)
P2	232	F	V	V::99.93(42794)
P2	233	F	V	V::99.93(42581)
P2	234	F	R	R::99.85(41767)
P2	235	F	R	R::99.87(42685)
P2	236	F	A	A::99.90(44472)
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P2	239	F	H	H::99.90(47347)
P2	240	F	C	C::99.92(46311)
P2	241	F	L	L::99.93(47502)
P2	242	F	A	A::99.93(50381)
P2	244	F	S	S::99.91(51052)
P2	245	F	Y	Y::98.08(48800)
P2	246	F	M	M::99.89(49991)
P2	247	F	D	D::99.87(52179)
P2	248	F	D	D::99.91(53357)
P2	249	F	V	V::99.91(52776)
P2	250	F	V	V::99.93(53415)
P2	251	F	L	L::99.91(53099)
P2	252	F	G	G::99.91(53771)
P2	253	F	A	A::99.73(53653)
P2	254	F	K	K::99.91(53127)
P2	255	F	S	S::99.92(51938)
P2	256	F	V	V::99.91(51300)
P2	257	F	Q	Q::99.84(51215)
P2	258	F	H	H::99.90(48673)
P2	259	F	L	L::99.93(50290)
P2	260	F	E	E::99.91(49103)
P2	261	F	S	S::99.71(51044)
P2	262	F	L	L::99.77(53920)
P2	264	F	T	T::99.90(53338)
P2	265	F	A	A::99.81(53882)
P2	266	F	V	V::99.93(54079)

P2	267	F	T	T::99.90(53273)
P2	268	F	N	N::99.90(55382)
P2	270	F	L	L::99.91(52946)
P2	271	F	L	L::99.92(49127)
P2	272	F	S	S::99.89(49411)
P2	273	F	L	L::99.93(48443)
P2	274	F	G	G::99.90(47922)
P2	275	F	I	I::99.92(47581)
P2	276	F	H	H::99.90(48949)
P2	277	F	L	L::99.92(45407)
P2	278	F	N	N::99.92(46012)
P2	279	F	P	P::99.92(44450)
P2	280	F	N	N::99.93(40305)
P2	281	F	K	K::99.95(40317)
P2	282	F	T	T::99.97(40316)
P2	283	F	K	K::99.96(42364)
P2	284	F	R	R::99.92(43575)
P2	285	F	W	W::99.88(43559)
P2	286	F	G	G::99.88(42318)
P2	287	F	Y	Y::99.92(42645)
P2	288	F	S	S::99.94(41308)
P2	289	F	L	L::99.91(38823)
P2	290	F	H	H::95.48(37872)
P2	292	F	M	M::99.89(38464)
P2	293	F	G	G::99.90(37181)
P2	294	F	Y	Y::99.92(36658)
P2	295	F	V	V::99.93(37853)
P2	296	F	I	I::99.95(36726)
P2	297	F	G	G::99.93(35181)
P2	298	F	C	C::94.74(32237) S::5.19(1766)
P2	299	F	Y	Y::94.13(31468) W::5.26(1760)
P2	300	F	G	G::99.89(33731)
P2	301	F	S	S::99.90(33523)
P2	302	F	L	L::99.91(32883)
P2	303	F	P	P::99.90(33534)
P2	304	F	Q	Q::99.91(34477)
P2	305	F	D	D::94.89(33282) E::5.05(1770)
P2	306	F	H	H::99.91(35769)
P2	307	F	I	I::99.95(35883)
P2	308	F	I	I::94.80(32544) R::5.12(1758)
P2	309	F	Q	Q::95.06(34557)
P2	310	F	K	K::99.93(34441)
P2	311	F	I	I::99.93(32096)
P2	312	F	K	K::99.90(32500)
P2	313	F	E	E::99.93(31989)
P2	314	F	C	C::99.91(32112)
P2	316	F	R	R::99.91(31419)
P2	317	F	K	K::99.93(33025)
P2	318	F	L	L::99.95(31704)
P2	319	F	P	P::99.91(31268)
P2	320	F	V	V::99.93(31276)

P2	321	F	N	N::99.92(31770)
P2	322	F	R	R::99.90(31052)
P2	323	F	P	P::99.92(31057)
P2	324	F	I	I::99.94(31365)
P2	325	F	D	D::99.92(32364)
P2	326	F	W	W::99.86(30804)
P2	327	F	K	K::98.61(28819)
P2	328	F	V	V::99.90(28667)
P2	329	F	C	C::99.85(29110)
P2	330	F	Q	Q::99.93(30200)
P2	331	F	R	R::99.78(29749)
P2	332	F	I	I::99.92(30726)
P2	333	F	V	V::99.93(31388)
P2	334	F	G	G::99.89(30917)
P2	335	F	L	L::99.91(29831)
P2	336	F	L	L::99.92(30993)
P2	337	F	G	G::99.91(30782)
P2	339	F	A	A::99.75(31029)
P2	340	F	A	A::99.77(30407)
P2	341	F	P	P::98.64(28326)
P2	343	F	T	T::99.91(29403)
P2	344	F	Q	Q::99.90(29131)
P2	345	F	C	C::99.92(29757)
P2	346	F	G	G::99.90(28591)
P2	347	F	Y	Y::99.92(29019)
P2	348	F	P	P::99.90(29166)
P2	349	F	A	A::99.86(28344)
P2	350	F	L	L::99.92(28860)
P2	351	F	M	M::99.87(29302)
P2	352	F	P	P::99.84(30833)
P2	353	F	L	L::99.82(29564)
P2	354	F	Y	Y::99.90(29603)
P2	355	F	A	A::99.87(26172)
P2	356	F	C	C::99.84(26163)
P2	357	F	I	I::99.93(27424)
P2	358	F	Q	Q::99.89(27610)
P2	359	F	S	S::99.96(28355)
P2	360	F	K	K::99.93(26030)
P2	361	F	Q	Q::99.93(27600)
P2	362	F	A	A::99.86(26278)
P2	364	F	T	T::99.94(27419)
P2	366	F	S	S::99.90(24761)
P2	367	F	P	P::99.92(25954)
P2	368	F	T	T::99.94(26339)
P2	369	F	Y	Y::99.90(26793)
P2	370	F	K	K::99.82(27077)
P2	371	F	A	A::99.94(27854)
P2	373	F	L	L::99.97(28009)
P2	374	F	C	C::99.89(27843)
P2	375	F	K	K::99.92(26619)
P2	376	F	Q	Q::99.93(26089)

P2	377	F	Y	Y::99.89(26447)
P2	378	F	L	L::99.87(25135)
P2	379	F	N	N::99.90(24812)
P2	380	F	L	L::99.93(24802)
P2	381	F	Y	Y::99.91(25404)
P2	382	F	P	P::99.90(23811)
P2	383	F	V	V::99.78(25489)
P2	384	F	A	A::99.69(23695)
P2	385	F	R	R::99.88(25197)
P2	386	F	Q	Q::99.87(26116)
P2	387	F	R	R::99.84(25085)
P2	388	F	P	P::99.94(24724)
P2	389	F	G	G::99.91(25335)
P2	390	F	L	L::99.95(25714)
P2	391	F	C	C::99.85(25674)
P2	392	F	Q	Q::99.88(25011)
P2	393	F	V	V::99.93(24866)
P2	395	F	A	A::99.77(23443)
P2	396	F	D	D::99.88(22993)
P2	397	F	A	A::99.77(23852)
P2	398	F	T	T::99.90(23081)
P2	399	F	P	P::99.92(23298)
P2	400	F	T	T::99.91(22857)
P2	401	F	G	G::99.84(22552)
P2	402	F	W	W::99.86(21585)
P2	403	F	G	G::99.89(22382)
P2	404	F	L	L::99.94(21340)
P2	405	F	V	V::94.42(20096) A::5.53(1176)
P2	406	F	M	M::94.13(21847) I::5.07(1176)
P2	407	F	G	G::99.79(24024)
P2	408	F	H	H::99.88(24371)
P2	409	F	Q	Q::99.88(24207)
P2	410	F	R	R::99.76(24200)
P2	411	F	M	M::99.92(22876)
P2	412	F	R	R::99.88(22142)
P2	413	F	G	G::99.90(20940)
P2	414	F	T	T::99.94(21885)
P2	416	F	L	L::98.71(20662)
P2	417	F	A	A::99.89(22134)
P2	418	F	P	P::99.93(21638)
P2	419	F	L	L::99.95(20673)
P2	420	F	P	P::99.83(21241)
P2	421	F	I	I::99.91(23526)
P2	422	F	H	H::99.89(23742)
P2	423	F	T	T::99.96(25162)
P2	424	F	A	A::99.25(25120)
P2	425	F	E	E::99.87(25563)
P2	426	F	L	L::99.90(25898)
P2	427	F	L	L::99.94(26620)
P2	428	F	A	A::99.95(27296)
P2	429	F	A	A::99.79(27609)

P2	430	F	C	C::99.93(27419)
P2	432	F	A	A::99.86(26807)
P2	433	F	R	R::99.89(26963)
P2	434	F	S	S::99.92(26789)
P2	435	F	R	R::99.88(25222)
P2	436	F	S	S::99.90(25229)
P2	437	F	G	G::99.92(25699)
P2	438	F	A	A::99.84(25116)
P2	439	F	N	N::95.23(24497)
P2	440	F	I	I::95.34(24977)
P2	441	F	L	L::95.12(24131)
P2	442	F	G	G::99.93(25994)
P2	443	F	T	T::99.90(25939)
P2	444	F	D	D::99.85(25833)
P2	445	F	N	N::99.95(26172)
P2	446	F	S	S::99.93(25949)
P2	447	F	V	V::99.94(25639)
P2	448	F	V	V::98.33(25229)
P2	449	F	L	L::99.92(25241)
P2	450	F	S	S::99.87(24757)
P2	451	F	R	R::99.84(24837)
P2	452	F	K	K::99.96(24612)
P2	453	F	Y	Y::99.94(24796)
P2	454	F	T	T::99.94(23475)
P2	455	F	S	S::99.96(23487)
P2	457	F	P	P::99.94(21814)
P2	458	F	W	W::99.89(21392)
P2	459	F	L	L::99.83(21001)
P2	460	F	L	L::99.96(21267)
P2	461	F	G	G::99.93(21545)
P2	462	F	C	C::99.89(21849)
P2	463	F	A	A::99.66(21441)
P2	464	F	A	A::99.80(21490)
P2	465	F	N	N::99.89(20690)
P2	466	F	W	W::99.91(20780)
P2	467	F	I	I::99.89(20575)
P2	468	F	L	L::99.91(20907)
P2	469	F	R	R::99.89(20975)
P2	470	F	G	G::99.95(19907)
P2	471	F	T	T::99.89(18264)
P2	472	F	S	S::99.91(18161)
P2	474	F	V	V::99.95(17684)
P2	475	F	Y	Y::99.93(16787)
P2	476	F	V	V::99.90(17075)
P2	477	F	P	P::99.90(16571)
P2	478	F	S	S::99.67(16047)
P2	479	F	A	A::99.89(15655)
P2	480	F	L	L::99.89(15659)
P2	481	F	N	N::99.88(15102)
P2	482	F	P	P::99.92(14734)
P2	483	F	A	A::99.93(13495)

P2	484	F	D	D::99.89(13392)
P2	485	F	D	D::99.81(13366)
P2	486	F	P	P::99.94(13225)
P2	487	F	S	S::99.93(13058)
P2	488	F	R	R::96.83(12831)
P2	489	F	G	G::99.87(13241)
P2	490	F	R	R::99.62(12174)
P2	491	F	L	L::99.85(12189)
P2	492	F	G	G::99.90(11927)
P2	493	F	L	L::99.92(11917)
P2	494	F	S	S::96.49(11231)
P2	495	F	R	R::99.73(11622)
P2	496	F	P	P::99.94(11560)
P2	497	F	L	L::99.87(11548)
P2	498	F	L	L::99.93(11556)
P2	499	F	C	C::99.67(11523)
P2	500	F	L	L::99.92(11811)
P2	501	F	P	P::99.85(11568)
P2	503	F	R	R::99.95(12603)
P2	504	F	P	P::99.88(14190)
P2	505	F	T	T::99.85(14614)
P2	506	F	T	T::99.91(15338)
P2	507	F	G	G::99.90(15596)
P2	508	F	R	R::99.74(16927)
P2	509	F	T	T::99.82(16791)
P2	510	F	S	S::99.95(16589)
P2	511	F	L	L::99.88(17291)
P2	512	F	Y	Y::99.92(16962)
P2	513	F	A	A::99.82(16931)
P2	514	F	D	D::99.85(16926)
P2	515	F	S	S::99.86(16872)
P2	516	F	P	P::99.95(17617)
P2	517	F	S	S::99.93(17899)
P2	518	F	V	V::99.90(17648)
P2	519	F	P	P::99.77(17620)
P2	520	F	S	S::99.93(17178)
P2	521	F	H	H::99.91(16955)
P2	522	F	L	L::99.89(16770)
P2	523	F	P	P::99.63(15819)
P2	524	F	D	D::99.83(16157)
P2	525	F	R	R::99.83(15844)
P2	526	F	V	V::99.92(16532)
P2	527	F	H	H::99.83(16213)
P2	529	F	A	A::99.91(16183)
P2	530	F	S	S::99.90(15487)
P2	531	F	P	P::99.95(15898)
P2	532	F	L	L::99.94(15892)
P2	533	F	H	H::99.81(15900)
P2	534	F	V	V::99.90(16287)
P2	535	F	A	A::99.80(16246)
P2	536	F	W	W::99.84(16034)

P2	537	F	R	R::99.64(15410)
P2	538	F	P	P::99.89(15403)
S2	1	F	S	S::100.00(8618)
S2	2	F	T	T::99.93(8748)
S2	3	F	T	T::99.97(8756)
S2	5	F	H	H::99.90(9088)
S2	6	F	Q	Q::99.95(9855)
S2	7	F	T	T::99.96(10112)
S2	8	F	L	L::99.95(10922)
S2	9	F	Q	Q::99.76(11438)
S2	10	F	D	D::99.93(12212)
S2	11	F	P	P::99.91(12867)
S2	12	F	R	R::99.85(12935)
S2	13	F	V	V::99.93(13569)
S2	14	F	R	R::99.72(13547)
S2	15	F	G	G::99.95(14866)
S2	16	F	L	L::99.83(15061)
S2	17	F	Y	Y::99.94(16320)
S2	19	F	P	P::99.92(16919)
S2	20	F	A	A::99.90(17148)
S2	21	F	G	G::99.90(17457)
S2	22	F	G	G::99.89(17538)
S2	23	F	S	S::99.91(17550)
S2	24	F	S	S::99.90(17581)
S2	25	F	S	S::99.93(18463)
S2	26	F	G	G::99.94(19022)
S2	27	F	T	T::99.97(19033)
S2	28	F	V	V::99.84(19561)
S2	29	F	N	N::99.92(19387)
S2	30	F	P	P::99.95(19125)
S2	31	F	V	V::99.91(18775)
S2	32	F	P	P::99.91(18466)
S2	33	F	T	T::99.91(18371)
S2	34	F	T	T::99.91(18324)
S2	35	F	V	V::99.90(18272)
S2	36	F	S	S::99.96(19081)
S2	37	F	P	P::99.42(20650)
S2	38	F	I	I::99.35(19865)
S2	39	F	S	S::99.93(19881)
S2	40	F	S	S::99.90(20220)
S2	41	F	I	I::99.95(20348)
S2	43	F	S	S::99.91(20313)
S2	44	F	R	R::99.91(20608)
S2	45	F	I	I::99.89(20373)
S2	46	F	G	G::99.85(20493)
S2	47	F	D	D::99.84(20794)
S2	48	F	P	P::99.91(19988)
S2	49	F	A	A::99.88(22189)
S2	50	F	L	L::96.72(22036)
S2	51	F	N	N::99.88(23455)
S2	52	F	M	M::99.81(23339)

S2	53	F	E	E::99.90(25114)
S2	54	F	N	N::98.06(24777)
S2	55	F	I	I::99.94(27203)
S2	56	F	T	T::99.93(27628)
S2	57	F	S	S::99.93(26917)
S2	58	F	G	G::98.24(26580)
S2	60	F	L	L::99.94(25830)
S2	61	F	G	G::99.95(25799)
S2	62	F	P	P::99.94(25156)
S2	63	F	L	L::99.94(26866)
S2	64	F	L	L::99.85(27523)
S2	65	F	V	V::99.95(26916)
S2	66	F	L	L::99.89(26903)
S2	67	F	Q	Q::98.29(27745)
S2	68	F	A	A::99.91(28254)
S2	69	F	G	G::99.93(28200)
S2	72	F	L	L::99.93(30870)
S2	73	F	L	L::99.94(31652)
S2	74	F	T	T::99.88(30467)
S2	75	F	R	R::97.48(29458)
S2	76	F	I	I::99.93(30465)
S2	77	F	L	L::99.95(30268)
S2	78	F	T	T::99.93(30856)
S2	79	F	I	I::99.93(30935)
S2	80	F	P	P::99.94(31444)
S2	81	F	Q	Q::98.55(32893)
S2	82	F	S	S::99.95(33340)
S2	83	F	L	L::99.95(32713)
S2	84	F	D	D::99.92(32817)
S2	85	F	S	S::99.94(32188)
S2	86	F	W	W::99.95(32387)
S2	87	F	W	W::99.88(31629)
S2	88	F	T	T::99.94(33536)
S2	89	F	S	S::99.95(33175)
S2	90	F	L	L::99.92(33942)
S2	91	F	N	N::99.96(34840)
S2	93	F	L	L::99.93(33018)
S2	94	F	G	G::99.91(33689)
S2	95	F	G	G::99.84(34246)
S2	96	F	T	T::99.92(34138)
S2	97	F	T	T::99.93(34434)
S2	98	F	V	V::99.83(35017)
S2	99	F	C	C::99.91(34494)
S2	100	F	L	L::99.92(36111)
S2	101	F	G	G::99.81(37243)
S2	102	F	Q	Q::99.82(35497)
S2	103	F	N	N::99.95(36311)
S2	104	F	S	S::99.93(35409)
S2	105	F	Q	Q::99.41(35551)
S2	106	F	S	S::99.92(34727)
S2	107	F	P	P::99.85(34563)

S2	108	F	T	T::99.95(34748)
S2	109	F	S	S::99.88(34710)
S2	110	F	N	N::98.62(34826)
S2	111	F	H	H::99.93(36400)
S2	112	F	S	S::99.91(35580)
S2	113	F	P	P::99.89(35369)
S2	114	F	T	T::99.92(35411)
S2	115	F	S	S::99.93(35999)
S2	116	F	C	C::99.85(37821)
S2	117	F	P	P::99.91(37277)
S2	118	F	P	P::99.30(37007)
S2	119	F	T	T::98.68(35829)
S2	120	F	C	C::99.92(36056)
S2	121	F	P	P::99.91(35278)
S2	122	F	G	G::99.94(36068)
S2	123	F	Y	Y::99.94(36465)
S2	124	F	R	R::99.74(36712)
S2	125	F	W	W::99.85(36468)
S2	126	F	M	M::99.81(36798)
S2	127	F	C	C::99.86(36399)
S2	128	F	L	L::99.92(37051)
S2	129	F	R	R::99.77(36356)
S2	130	F	R	R::99.80(37149)
S2	132	F	I	I::99.89(37662)
S2	133	F	I	I::99.91(38335)
S2	135	F	L	L::99.94(38895)
S2	137	F	I	I::99.95(39106)
S2	138	F	L	L::99.90(38126)
S2	139	F	L	L::99.97(38111)
S2	140	F	L	L::99.95(37312)
S2	141	F	C	C::99.91(37923)
S2	142	F	L	L::99.90(38983)
S2	143	F	I	I::99.92(38246)
S2	145	F	L	L::99.94(37499)
S2	146	F	L	L::99.92(40761)
S2	147	F	V	V::99.91(39074)
S2	148	F	L	L::99.94(37500)
S2	149	F	L	L::99.90(36359)
S2	150	F	D	D::99.92(34823)
S2	151	F	Y	Y::99.87(35275)
S2	152	F	Q	Q::99.88(34681)
S2	153	F	G	G::99.93(35171)
S2	154	F	M	M::99.90(33996)
S2	155	F	L	L::99.91(34004)
S2	156	F	P	P::99.88(35467)
S2	157	F	V	V::99.88(35312)
S2	158	F	C	C::99.91(35341)
S2	159	F	P	P::99.84(36667)
S2	160	F	L	L::99.94(36317)
S2	161	F	I	I::99.94(34886)
S2	162	F	P	P::99.88(34588)

S2	163	F	G	G::99.92(34502)
S2	164	F	S	S::99.96(29844)
S2	165	F	S	S::99.91(30726)
S2	166	F	T	T::99.96(30939)
S2	167	F	T	T::99.70(31026)
S2	168	F	S	S::99.89(30931)
S2	169	F	T	T::99.90(30916)
S2	170	F	G	G::99.87(31363)
S2	171	F	P	P::99.91(28517)
S2	172	F	C	C::99.84(28501)
S2	173	F	R	R::99.89(28149)
S2	174	F	T	T::99.86(30115)
S2	175	F	C	C::99.73(30062)
S2	176	F	T	T::99.89(24858)
S2	177	F	T	T::99.94(24868)
S2	178	F	P	P::98.82(24590)
S2	179	F	A	A::99.90(28839)
S2	180	F	Q	Q::99.89(28881)
S2	181	F	G	G::99.92(29434)
S2	182	F	T	T::99.90(29016)
S2	183	F	S	S::99.92(29117)
S2	184	F	M	M::99.91(28527)
S2	185	F	Y	Y::99.90(28658)
S2	186	F	P	P::99.90(27999)
S2	187	F	S	S::99.93(27205)
S2	188	F	C	C::99.90(25627)
S2	189	F	C	C::99.91(27134)
S2	190	F	C	C::99.78(26558)
S2	191	F	T	T::99.92(27473)
S2	192	F	K	K::99.91(26881)
S2	193	F	P	P::99.95(24962)
S2	194	F	S	S::99.94(24818)
S2	195	F	D	D::99.88(25138)
S2	196	F	G	G::99.84(26645)
S2	197	F	N	N::99.91(27569)
S2	198	F	C	C::99.89(27545)
S2	199	F	T	T::99.90(25223)
S2	200	F	C	C::99.83(25407)
S2	201	F	I	I::99.85(26240)
S2	202	F	P	P::99.87(26043)
S2	203	F	I	I::99.95(26433)
S2	204	F	P	P::99.94(26999)
S2	205	F	S	S::99.94(26688)
S2	206	F	S	S::99.93(27491)
S2	207	F	W	W::99.91(27889)
S2	208	F	A	A::99.91(26964)
S2	210	F	G	G::99.81(27029)
S2	211	F	K	K::99.93(29328)
S2	213	F	L	L::99.46(28948)
S2	214	F	W	W::99.90(28855)
S2	215	F	E	E::99.88(29850)

S2	216	F	W	W::99.85(30790)
S2	217	F	A	A::99.80(30999)
S2	218	F	S	S::99.81(30918)
S2	219	F	A	A::99.88(31647)
S2	220	F	R	R::99.82(32331)
S2	222	F	S	S::99.95(36473)
S2	223	F	W	W::99.82(36896)
S2	224	F	L	L::99.92(37329)
S2	225	F	S	S::99.91(36837)
S2	226	F	L	L::99.94(35448)
S2	227	F	L	L::99.94(35699)
S2	228	F	V	V::99.91(39359)
S2	229	F	P	P::99.91(39860)
S2	231	F	V	V::99.92(41458)
S2	232	F	Q	Q::99.89(42777)
S2	233	F	W	W::99.91(42750)
S2	235	F	V	V::99.84(41101)
S2	236	F	G	G::99.90(42713)
S2	237	F	L	L::99.92(44303)
S2	238	F	S	S::99.81(43033)
S2	239	F	P	P::99.90(45621)
S2	240	F	T	T::99.93(46670)
S2	241	F	V	V::99.95(47177)
S2	242	F	W	W::99.90(47494)
S2	243	F	L	L::99.92(50370)
S2	244	F	L	L::95.43(46532)
S2	245	F	V	V::99.94(51680)
S2	246	F	I	I::99.93(48816)
S2	247	F	W	W::99.88(51004)
S2	248	F	M	M::99.86(52196)
S2	249	F	M	M::99.87(53197)
S2	250	F	W	W::99.87(52759)
S2	251	F	Y	Y::99.88(53391)
S2	252	F	W	W::99.86(53964)
S2	253	F	G	G::99.93(53767)
S2	254	F	P	P::99.80(53156)
S2	255	F	S	S::99.88(53115)
S2	256	F	L	L::99.95(51860)
S2	257	F	Y	Y::99.89(51290)
S2	258	F	S	S::96.39(49632)
S2	259	F	I	I::99.92(48682)
S2	260	F	L	L::99.91(50282)
S2	261	F	S	S::99.70(49481)
S2	262	F	P	P::99.88(52497)
S2	264	F	L	L::96.35(51626)
S2	265	F	P	P::99.87(53312)
S2	266	F	L	L::99.92(53424)
S2	267	F	L	L::99.90(54316)
S2	268	F	P	P::99.88(54126)
S2	269	F	I	I::99.92(54948)
S2	272	F	C	C::99.89(49099)

S2	273	F	L	L::99.92(49321)
S2	274	F	W	W::99.86(48212)
S2	275	F	V	V::99.93(47937)
S2	276	F	Y	Y::99.90(47572)
X	1	F	M	M::99.91(21516)
X	2	F	A	A::99.90(21139)
X	3	F	A	A::99.89(21255)
X	4	F	R	R::99.90(21537)
X	5	F	L	L::99.92(21531)
X	6	F	C	C::99.74(22162)
X	7	F	C	C::99.80(21456)
X	8	F	Q	Q::99.86(20683)
X	9	F	L	L::99.97(20519)
X	10	F	D	D::99.88(20382)
X	11	F	P	P::99.95(20920)
X	12	F	A	A::99.90(20984)
X	13	F	R	R::99.95(19888)
X	14	F	D	D::99.91(18282)
X	15	F	V	V::99.83(18148)
X	16	F	L	L::99.79(16378)
X	17	F	C	C::99.93(16427)
X	18	F	L	L::99.98(17395)
X	19	F	R	R::99.87(17068)
X	20	F	P	P::99.97(17032)
X	21	F	V	V::99.70(16461)
X	22	F	G	G::99.93(16089)
X	23	F	A	A::99.83(15385)
X	24	F	E	E::99.91(15107)
X	25	F	S	S::99.87(14950)
X	26	F	R	R::99.93(13642)
X	27	F	G	G::99.93(13397)
X	28	F	R	R::99.81(13367)
X	29	F	P	P::99.93(13346)
X	31	F	S	S::99.87(13101)
X	32	F	G	G::99.94(13248)
X	33	F	P	P::99.87(12751)
X	34	F	L	L::99.96(12210)
X	35	F	G	G::99.89(11926)
X	36	F	T	T::99.91(11924)
X	37	F	L	L::96.49(11231)
X	38	F	S	S::99.87(11640)
X	39	F	S	S::99.93(12027)
X	40	F	P	P::99.87(11548)
X	41	F	S	S::99.91(11554)
X	42	F	L	L::99.71(11528)
X	43	F	S	S::99.98(11824)
X	44	F	A	A::99.83(12007)
X	45	F	V	V::99.93(11578)
X	46	F	S	S::99.94(12331)
X	47	F	T	T::99.84(13485)
X	48	F	D	D::99.86(14611)

X	49	F	H	H::99.89(15333)
X	50	F	G	G::99.90(15595)
X	51	F	A	A::99.88(15823)
X	52	F	H	H::99.79(16790)
X	53	F	L	L::99.90(16640)
X	54	F	S	S::99.91(17298)
X	55	F	L	L::99.94(16963)
X	56	F	R	R::99.86(16952)
X	57	F	G	G::99.91(16932)
X	58	F	L	L::99.86(16913)
X	59	F	P	P::99.92(17201)
X	60	F	V	V::99.92(17897)
X	61	F	C	C::99.78(17623)
X	62	F	A	A::99.77(17623)
X	64	F	S	S::99.89(16954)
X	65	F	S	S::99.90(16774)
X	66	F	A	A::99.67(17084)
X	67	F	G	G::99.88(16164)
X	68	F	P	P::99.89(15858)
X	69	F	C	C::99.94(16707)
X	70	F	A	A::99.87(15745)
X	71	F	L	L::99.91(16226)
X	72	F	R	R::99.92(16220)
X	74	F	T	T::99.88(15886)
X	75	F	S	S::99.94(15894)
X	76	F	A	A::99.83(15902)
X	77	F	R	R::99.82(15905)
X	78	F	R	R::99.77(16263)
X	79	F	M	M::99.81(16543)
X	80	F	E	E::99.88(15457)
X	81	F	T	T::99.73(15407)
X	82	F	T	T::99.86(15395)
X	83	F	V	V::99.76(15372)
X	84	F	N	N::99.87(15357)
X	85	F	A	A::99.78(15180)
X	86	F	H	H::99.82(15555)
X	87	F	Q	Q::89.44(13895) L::7.88(1225)
X	88	F	F	F::91.88(14100) C::5.34(820)
X	89	F	L	L::99.91(15189)
X	90	F	P	P::99.87(14647)
X	91	F	K	K::99.90(14453)
X	92	F	V	V::99.94(14104)
X	93	F	L	L::99.92(13216)
X	94	F	H	H::99.89(13208)
X	95	F	K	K::99.92(11916)
X	96	F	R	R::99.92(11598)
X	97	F	T	T::99.95(10571)
X	98	F	L	L::99.89(9456)
X	99	F	G	G::99.92(8818)
X	100	F	L	L::99.91(9027)
X	101	F	S	S::99.90(7773)

X	102	F	V	V::99.99(16297)
X	103	F	M	M::99.90(19098)
X	104	F	S	S::99.88(18006)
X	105	F	T	T::99.89(18016)
X	106	F	T	T::99.82(18034)
X	107	F	D	D::99.89(18051)
X	108	F	L	L::99.88(18053)
X	109	F	E	E::99.83(17205)
X	110	F	A	A::99.60(16976)
X	111	F	Y	Y::99.86(16874)
X	113	F	K	K::99.85(16843)
X	114	F	D	D::99.86(16850)
X	115	F	C	C::99.90(16251)
X	116	F	L	L::99.90(16177)
X	118	F	K	K::99.85(15107)
X	119	F	D	D::99.83(15108)
X	120	F	W	W::99.90(14637)
X	121	F	E	E::99.86(14633)
X	122	F	E	E::99.85(14236)
X	123	F	L	L::99.91(14239)
X	124	F	G	G::99.94(14383)
X	125	F	E	E::99.72(14176)
X	126	F	E	E::99.89(14170)
X	127	F	I	I::97.43(13466)
X	128	F	R	R::99.94(13842)
X	129	F	L	L::99.88(13705)
X	130	F	K	K::96.80(12773)
X	131	F	L	L::87.85(11592) I::9.27(1223)
X	132	F	F	F::93.71(12367) Y::6.24(823)
X	133	F	V	V::99.95(13191)
X	134	F	L	L::99.93(13188)
X	135	F	G	G::99.94(13190)
X	136	F	G	G::99.88(13183)
X	137	F	C	C::99.81(13173)
X	138	F	R	R::99.89(13182)
X	139	F	H	H::99.84(13176)
X	140	F	K	K::99.85(13060)
X	141	F	L	L::99.84(12930)
X	142	F	V	V::99.88(12936)
X	143	F	C	C::99.90(12937)
X	144	F	A	A::99.85(12867)
X	145	F	P	P::96.63(12453)
X	146	F	A	A::99.84(12737)
X	147	F	P	P::99.95(12238)
X	148	F	C	C::99.84(12224)
X	149	F	N	N::99.93(12233)
X	152	F	T	T::100.00(373)
X	153	F	S	S::99.73(372)
C	1	F	M	M::99.85(10720)
C	2	F	D	D::99.88(10725)
C	3	F	I	I::99.94(11045)

C	4	F	D	D::99.81(11032)
C	5	F	P	P::99.89(11041)
C	6	F	Y	Y::99.92(11206)
C	7	F	K	K::99.97(11559)
C	8	F	E	E::99.95(11950)
C	10	F	G	G::99.91(12298)
C	11	F	A	A::99.93(12694)
C	12	F	T	T::99.87(13536)
C	13	F	V	V::99.72(13564)
C	14	F	E	E::99.96(13602)
C	15	F	L	L::99.93(13598)
C	16	F	L	L::99.90(13595)
C	17	F	S	S::99.99(13575)
C	19	F	L	L::99.88(14487)
C	20	F	P	P::99.83(14960)
C	21	F	S	S::99.93(14981)
C	22	F	D	D::98.65(14786)
C	25	F	P	P::99.86(15836)
C	26	F	S	S::99.04(15688)
C	27	F	V	V::99.95(16589)
C	28	F	R	R::99.95(16587)
C	29	F	D	D::99.89(16579)
C	30	F	L	L::99.96(16592)
C	31	F	L	L::99.98(16577)
C	32	F	D	D::99.90(16567)
C	33	F	T	T::99.95(16543)
C	34	F	A	A::99.92(16519)
C	35	F	S	S::99.93(16750)
C	36	F	A	A::98.93(16742)
C	37	F	L	L::99.92(10293)
C	38	F	Y	Y::99.94(10301)
C	39	F	R	R::99.95(10141)
C	40	F	E	E::97.71(7990)
C	41	F	A	A::99.91(8761)
C	42	F	L	L::99.95(9110)
C	43	F	E	E::99.95(9350)
C	44	F	S	S::99.93(9018)
C	45	F	P	P::99.95(8545)
C	46	F	E	E::99.94(8117)
C	47	F	H	H::99.89(8135)
C	48	F	C	C::99.89(8389)
C	49	F	S	S::99.89(8391)
C	50	F	P	P::99.92(8391)
C	51	F	H	H::99.89(8067)
C	52	F	H	H::99.94(8326)
C	53	F	T	T::99.80(8166)
C	54	F	A	A::99.87(8362)
C	55	F	L	L::99.93(8366)
C	56	F	R	R::99.87(8276)
C	57	F	Q	Q::99.85(8018)
C	58	F	A	A::99.89(8123)

C	59	F	I	I::99.94(8519)
C	60	F	L	L::97.59(7912)
C	61	F	C	C::99.93(7628)
C	62	F	W	W::99.92(7282)
C	63	F	G	G::99.89(7856)
C	64	F	E	E::99.38(7887)
C	65	F	L	L::99.97(9182)
C	66	F	M	M::99.92(9465)
C	67	F	T	T::99.69(9441)
C	68	F	L	L::99.93(8476)
C	69	F	A	A::99.79(8255)
C	70	F	T	T::99.94(8267)
C	71	F	W	W::99.96(9512)
C	72	F	V	V::99.96(9805)
C	73	F	G	G::99.95(9794)
C	74	F	G	G::97.54(8755)
C	75	F	N	N::98.18(10106)
C	76	F	L	L::99.88(10291)
C	77	F	Q	Q::89.05(9105) E::10.71(1095)
C	78	F	D	D::99.88(10582)
C	79	F	P	P::99.93(10685)
C	80	F	T	T::95.21(10178)
C	81	F	S	S::99.92(10668)
C	82	F	R	R::99.88(10664)
C	83	F	D	D::99.92(12695)
C	84	F	L	L::99.92(12350)
C	85	F	V	V::99.94(12192)
C	86	F	V	V::99.90(12600)
C	87	F	S	S::97.44(12885)
C	88	F	Y	Y::99.93(13434)
C	89	F	V	V::99.91(12947)
C	90	F	N	N::99.95(12941)
C	91	F	T	T::99.93(13510)
C	92	F	N	N::97.71(12998)
C	93	F	M	M::97.52(12306)
C	94	F	G	G::99.78(12592)
C	95	F	L	L::99.92(12608)
C	96	F	K	K::99.94(13686)
C	98	F	R	R::99.85(15053)
C	99	F	Q	Q::99.92(15672)
C	100	F	L	L::98.78(15489)
C	101	F	L	L::99.96(15747)
C	102	F	W	W::99.88(17357)
C	104	F	H	H::99.91(17450)
C	105	F	I	I::99.96(18501)
C	106	F	S	S::99.95(18558)
C	107	F	C	C::99.91(18062)
C	108	F	L	L::99.86(18818)
C	109	F	T	T::99.92(19874)
C	111	F	G	G::99.87(19554)
C	112	F	R	R::99.94(20118)

C	113	F	D	D::88.36(17567) E::11.61(2308)
C	114	F	T	T::99.68(20190)
C	115	F	V	V::99.89(20339)
C	116	F	I	I::99.94(21617)
C	117	F	E	E::99.12(22445)
C	118	F	Y	Y::99.94(21994)
C	119	F	L	L::99.93(22106)
C	120	F	V	V::99.91(21125)
C	121	F	S	S::99.96(22609)
C	123	F	G	G::99.92(21569)
C	124	F	V	V::99.92(21670)
C	125	F	W	W::99.79(21605)
C	126	F	I	I::99.92(22554)
C	127	F	R	R::99.72(22821)
C	128	F	T	T::99.95(23069)
C	129	F	P	P::99.94(24065)
C	130	F	P	P::98.75(24473)
C	131	F	A	A::96.05(23814)
C	132	F	Y	Y::99.90(25119)
C	133	F	R	R::99.87(26834)
C	134	F	P	P::99.87(26981)
C	135	F	P	P::99.55(26707)
C	136	F	N	N::99.92(27771)
C	137	F	A	A::99.85(27994)
C	138	F	P	P::99.92(29046)
C	139	F	I	I::99.96(29047)
C	140	F	L	L::99.94(29531)
C	141	F	S	S::99.94(31859)
C	142	F	T	T::99.94(31787)
C	143	F	L	L::99.39(32498)
C	144	F	P	P::99.91(32818)
C	145	F	E	E::99.92(33295)
C	146	F	T	T::96.82(33253)
C	147	F	T	T::99.02(33115)
C	148	F	V	V::99.94(34697)
C	149	F	V	V::99.95(36382)
C	150	F	R	R::99.93(36252)
C	151	F	R	R::99.90(35599)
C	152	F	R	R::99.89(35051)
C	153	F	G	G::99.91(35520)
C	154	F	R	R::99.85(36227)
C	155	F	S	S::99.88(35372)
C	156	F	P	P::99.92(34873)
C	157	F	R	R::98.72(34979)
C	158	F	R	R::99.91(35142)
C	159	F	R	R::99.77(34949)
C	160	F	T	T::99.93(34923)
C	161	F	P	P::99.92(34597)
C	162	F	S	S::99.93(35362)
C	163	F	P	P::99.95(36911)
C	164	F	R	R::99.78(36471)

C	165	F	R	R::99.88(35484)
C	166	F	R	R::99.87(37155)
C	167	F	R	R::99.88(37238)
C	168	F	S	S::99.37(38780)
C	169	F	Q	Q::99.90(39040)
C	170	F	S	S::99.92(38118)
C	171	F	P	P::99.90(38882)
C	172	F	R	R::99.91(38844)
C	173	F	R	R::99.79(38810)
C	174	F	R	R::99.86(39038)
C	175	F	R	R::99.91(38122)
C	176	F	S	S::99.94(38527)
C	177	F	Q	Q::98.41(37727)
C	178	F	S	S::99.94(37520)
C	179	F	R	R::99.94(37416)
C	180	F	E	E::95.85(35788)
C	181	F	S	S::99.68(36161)
C	182	F	Q	Q::99.92(34547)
P1	1	F	M	M::99.87(28144)
P1	2	F	P	P::99.90(28821)
P1	3	F	L	L::99.89(29025)
P1	4	F	S	S::99.96(29013)
P1	5	F	Y	Y::99.93(30981)
P1	6	F	Q	Q::99.90(31911)
P1	7	F	H	H::99.38(32138)
P1	9	F	R	R::99.84(33637)
P1	10	F	R	R::99.90(33318)
P1	11	F	L	L::96.79(32904)
P1	12	F	L	L::99.04(33281)
P1	13	F	L	L::99.94(34493)
P1	14	F	L	L::99.96(36220)
P1	15	F	D	D::99.93(36662)
P1	16	F	D	D::97.73(34826)
P1	17	F	E	E::99.90(35056)
P1	18	F	A	A::99.81(35474)
P1	19	F	G	G::99.91(35598)
P1	20	F	P	P::99.93(34723)
P1	21	F	L	L::99.95(34500)
P1	22	F	E	E::98.69(34411)
P1	23	F	E	E::99.90(34991)
P1	24	F	E	E::99.79(34878)
P1	25	F	L	L::99.91(34853)
P1	26	F	P	P::99.92(34699)
P1	27	F	R	R::99.90(36448)
P1	28	F	L	L::99.92(36855)
P1	29	F	A	A::99.83(35490)
P1	30	F	D	D::99.92(35817)
P1	31	F	E	E::99.79(37533)
P1	32	F	G	G::99.37(37050)
P1	33	F	L	L::99.38(38937)
P1	34	F	N	N::99.90(39204)

P1	35	F	R	R::99.68(38033)
P1	36	F	R	R::99.90(39311)
P1	37	F	V	V::99.89(38843)
P1	38	F	A	A::99.78(39043)
P1	39	F	E	E::99.93(38730)
P1	40	F	D	D::99.92(38521)
P1	41	F	L	L::99.85(37777)
P1	42	F	N	N::99.91(38467)
P1	43	F	L	L::99.96(37611)
P1	44	F	G	G::99.92(37751)
P1	45	F	N	N::95.88(35812)
P1	46	F	L	L::98.07(35507)
P1	47	F	N	N::99.91(35211)
P1	48	F	V	V::99.81(35145)
P1	49	F	S	S::97.26(34527)
P1	50	F	I	I::99.92(34908)
P1	51	F	P	P::99.91(34915)
P1	52	F	W	W::99.78(33749)
P1	53	F	T	T::99.94(33918)
P1	54	F	H	H::98.67(31481)
P1	55	F	K	K::99.90(31438)
P1	56	F	V	V::99.93(31503)
P1	57	F	G	G::99.77(30021)
P1	58	F	N	N::99.93(30517)
P1	60	F	T	T::99.86(29959)
P1	61	F	G	G::99.92(31600)
P1	62	F	L	L::99.94(30965)
P1	63	F	Y	Y::99.93(28933)
P1	64	F	S	S::99.94(28931)
P1	65	F	S	S::99.94(28188)
P1	66	F	T	T::98.46(28822)
P1	67	F	V	V::99.95(27923)
P1	68	F	P	P::99.94(28843)
P1	69	F	V	V::99.89(29077)
P1	71	F	N	N::99.89(29382)
P1	72	F	P	P::99.91(28477)
P1	73	F	H	H::99.93(28610)
P1	74	F	W	W::99.84(28576)
P1	75	F	K	K::99.92(28552)
P1	76	F	T	T::99.87(26313)
P1	77	F	P	P::99.89(24760)
P1	78	F	S	S::99.92(25006)
P1	80	F	P	P::99.92(23319)
P1	81	F	N	N::99.92(20395)
P1	82	F	I	I::99.93(21109)
P1	83	F	H	H::99.89(21340)
P1	84	F	L	L::99.95(21317)
P1	85	F	H	H::99.90(21255)
P1	86	F	Q	Q::99.88(21128)
P1	87	F	D	D::99.91(21180)
P1	88	F	I	I::99.95(20912)

P1	89	F	I	I::99.93(21389)
P1	90	F	K	K::99.95(21344)
P1	91	F	K	K::99.90(20757)
P1	92	F	C	C::99.88(20843)
P1	93	F	E	E::99.86(20874)
P1	94	F	Q	Q::99.94(20807)
P1	96	F	V	V::99.89(20264)
P1	97	F	G	G::99.84(19298)
P1	98	F	P	P::99.43(19440)
P1	99	F	L	L::99.93(19161)
P1	100	F	T	T::99.87(18419)
P1	101	F	V	V::99.89(16889)
P1	102	F	N	N::99.92(18158)
P1	103	F	E	E::99.91(18162)
P1	104	F	K	K::99.96(18280)
P1	105	F	R	R::99.90(17835)
P1	106	F	R	R::99.90(18327)
P1	107	F	L	L::99.94(17087)
P1	108	F	Q	Q::99.02(17364)
P1	109	F	L	L::99.95(17103)
P1	110	F	I	I::99.08(16763)
P1	111	F	M	M::99.82(15488)
P1	112	F	P	P::99.81(15978)
P1	113	F	A	A::99.89(15995)
P1	114	F	R	R::99.91(16559)
P1	116	F	Y	Y::98.95(15531)
P1	117	F	P	P::99.87(15010)
P1	118	F	N	N::97.28(13639)
P1	119	F	V	V::98.92(14434)
P1	120	F	T	T::99.90(15587)
P1	121	F	K	K::99.92(15619)
P1	122	F	Y	Y::99.95(15343)
P1	123	F	L	L::99.92(15689)
P1	124	F	P	P::99.83(15185)
P1	125	F	L	L::99.93(15245)
P1	126	F	D	D::97.97(15238)
P1	127	F	K	K::99.77(15540)
P1	128	F	G	G::99.77(15299)
P1	129	F	I	I::99.93(15995)
P1	130	F	K	K::99.90(16310)
P1	131	F	P	P::99.95(16414)
P1	132	F	Y	Y::99.92(16032)
P1	133	F	Y	Y::99.97(15736)
P1	134	F	P	P::99.92(15412)
P1	135	F	E	E::98.91(15156)
P1	136	F	H	H::98.94(14993)
P1	137	F	L	L::98.96(15015)
P1	138	F	V	V::99.92(15818)
P1	139	F	N	N::99.93(15455)
P1	140	F	H	H::99.91(14724)
P1	141	F	Y	Y::99.93(14561)

P1	143	F	Q	Q::99.92(14289)
P1	144	F	T	T::99.91(13986)
P1	145	F	R	R::99.91(14018)
P1	146	F	H	H::99.92(13521)
P1	147	F	Y	Y::99.92(14417)
P1	148	F	L	L::99.89(14627)
P1	149	F	H	H::99.87(14314)
P1	150	F	T	T::99.94(14216)
P1	151	F	L	L::99.96(13916)
P1	152	F	W	W::99.80(14560)
P1	153	F	K	K::99.91(14611)
P1	154	F	A	A::99.86(14602)
P1	155	F	G	G::99.78(14414)
P1	156	F	I	I::99.82(14300)
P1	157	F	L	L::99.93(14138)
P1	158	F	Y	Y::99.94(14133)
P1	159	F	Q	Q::97.23(12308)
P1	160	F	R	R::99.92(13051)
P1	161	F	E	E::99.94(12663)
P1	162	F	T	T::99.92(13103)
P1	163	F	T	T::99.93(12665)
P1	164	F	R	R::99.38(11828)
P1	165	F	S	S::99.88(11888)
P1	166	F	A	A::99.93(13096)
P1	167	F	S	S::99.89(13648)
P1	169	F	C	C::99.93(13388)
P1	170	F	G	G::99.88(12781)
P1	171	F	S	S::99.89(13174)
P1	172	F	P	P::99.87(13197)
P1	173	F	Y	Y::99.95(13284)
P1	174	F	S	S::99.97(13212)
P1	175	F	W	W::99.77(13273)
P1	176	F	E	E::99.69(13349)
P1	177	F	Q	Q::99.90(13585)
P1	178	F	E	E::99.87(13580)
P1	179	F	L	L::99.97(12876)
P1	180	F	Q	Q::99.43(12665)
P1	181	F	H	H::99.86(12690)
P1	182	F	G	G::99.64(12599)
P1	183	F	A	A::98.70(12170)
P1	184	F	E	E::99.66(12384)
P1	185	F	S	S::99.97(12693)
P1	187	F	H	H::99.88(12304)
P1	188	F	Q	Q::98.62(12172)
P1	189	F	Q	Q::99.92(13057)
P1	190	F	S	S::99.95(12964)
P1	191	F	S	S::99.89(12949)
P1	192	F	G	G::99.62(13360)
P1	193	F	I	I::99.92(13519)
P1	194	F	L	L::98.81(13240)
P1	195	F	S	S::99.87(13013)

P1	196	F	R	R::99.91(12364)
P1	197	F	P	P::99.93(12734)
P1	198	F	P	P::99.91(13602)
P1	199	F	V	V::99.96(13840)
P1	200	F	G	G::99.70(13591)
P1	201	F	S	S::99.92(13261)
P1	202	F	S	S::99.87(13003)
P1	203	F	L	L::98.72(12624)
P1	204	F	Q	Q::99.91(12822)
P1	205	F	S	S::99.87(13067)
P1	206	F	K	K::99.91(13528)
P1	207	F	H	H::99.90(13402)
P1	208	F	R	R::98.45(13605)
P1	209	F	K	K::99.93(13568)
P1	210	F	S	S::99.94(13449)
P1	211	F	R	R::99.86(13269)
P1	212	F	L	L::99.91(14087)
P1	213	F	G	G::99.95(14859)
P1	214	F	L	L::98.74(14876)
P1	215	F	Q	Q::99.89(15350)
P1	216	F	S	S::99.95(15372)
P1	217	F	Q	Q::99.96(15236)
P1	218	F	Q	Q::99.92(15865)
P1	219	F	G	G::98.50(15467)
P1	220	F	H	H::98.56(15778)
P1	221	F	L	L::99.05(15970)
P1	222	F	A	A::98.50(15930)
P1	223	F	G	G::95.07(14436)
P1	224	F	R	R::98.27(15268)
P1	225	F	Q	Q::99.96(15602)
P1	226	F	Q	Q::99.91(15264)
P1	227	F	G	G::97.58(15149)
P1	228	F	R	R::99.90(15639)
P1	229	F	S	S::99.87(15645)
P1	230	F	W	W::99.50(15382)
P1	231	F	S	S::99.86(15635)
P1	232	F	I	I::99.90(15639)
P1	233	F	R	R::99.85(15453)
P1	234	F	A	A::99.90(14477)
P1	235	F	G	G::98.77(14856)
P1	236	F	I	I::99.46(15295)
P1	237	F	H	H::99.90(15906)
P1	238	F	P	P::99.51(15797)
P1	239	F	T	T::99.52(15373)
P1	240	F	A	A::99.18(15325)
P1	241	F	R	R::99.87(15508)
P1	242	F	R	R::99.87(15239)
P1	243	F	P	P::99.91(15238)
P1	245	F	G	G::99.89(15154)
P1	246	F	V	V::99.95(14726)
P1	247	F	E	E::99.88(13956)

P1	248	F	P	P::99.93(13852)
P1	249	F	S	S::99.90(14206)
P1	250	F	G	G::99.90(14962)
P1	251	F	S	S::99.92(15135)
P1	252	F	G	G::99.24(15235)
P1	253	F	H	H::99.91(15158)
P1	254	F	T	T::99.91(14090)
P1	255	F	T	T::99.67(14056)
P1	256	F	N	N::99.90(16243)
P1	257	F	L	L::99.16(15911)
P1	258	F	A	A::99.86(16374)
P1	259	F	S	S::99.28(16345)
P1	260	F	K	K::99.72(16681)
P1	261	F	S	S::99.96(16015)
P1	262	F	A	A::97.42(15417)
P1	263	F	S	S::99.94(15322)
P1	264	F	C	C::98.47(14160)
P1	265	F	L	L::99.90(12725)
P1	266	F	N	N::93.85(11955)
P1	267	F	Q	Q::99.91(12728)
P1	268	F	S	S::99.88(12234)
P1	269	F	P	P::99.59(12038)
P1	270	F	V	V::99.89(10962)
P1	271	F	R	R::99.85(10958)
P1	272	F	K	K::99.89(10765)
P1	273	F	A	A::99.81(10545)
P1	274	F	A	A::99.50(10287)
P1	275	F	N	N::92.25(9108) Y::7.59(749)
P1	276	F	P	P::99.91(9862)
P1	277	F	S	S::99.84(9363)
P1	278	F	V	V::99.85(9364)
P1	279	F	S	S::97.30(9118)
P1	280	F	T	T::99.89(9146)
P1	282	F	E	E::99.84(8970)
P1	283	F	K	K::99.88(8949)
P1	284	F	H	H::99.93(8422)
P1	285	F	P	P::92.38(7551) A::5.11(418)
P1	286	F	S	S::99.90(7958)
P1	287	F	S	S::99.91(7428)
P1	288	F	G	G::99.85(7339)
P1	289	F	H	H::99.94(7251)
P1	290	F	A	A::98.98(6890)
P1	291	F	V	V::99.90(6930)
S1	1	F	M	M::99.59(12519)
S1	2	F	G	G::99.67(12594)
S1	3	F	Q	Q::98.65(12165)
S1	4	F	N	N::99.94(12773)
S1	5	F	L	L::98.71(12213)
S1	6	F	S	S::99.96(12392)
S1	7	F	T	T::99.90(12306)
S1	8	F	S	S::98.28(12133)

S1	9	F	N	N::99.92(13062)
S1	10	F	P	P::99.95(12970)
S1	11	F	L	L::99.89(12946)
S1	12	F	G	G::99.66(13185)
S1	15	F	P	P::99.87(12879)
S1	16	F	D	D::99.83(12545)
S1	17	F	H	H::99.91(12870)
S1	18	F	Q	Q::98.86(13270)
S1	19	F	L	L::99.93(13613)
S1	20	F	D	D::99.90(13621)
S1	21	F	P	P::99.92(12933)
S1	22	F	A	A::99.83(12883)
S1	24	F	R	R::97.73(12852)
S1	25	F	A	A::99.88(13053)
S1	26	F	N	N::99.90(13532)
S1	27	F	T	T::99.90(13406)
S1	28	F	A	A::98.51(13520)
S1	29	F	N	N::99.97(13574)
S1	30	F	P	P::99.95(13219)
S1	31	F	D	D::99.91(13891)
S1	32	F	W	W::99.90(14235)
S1	33	F	D	D::99.92(15112)
S1	35	F	N	N::99.90(15408)
S1	36	F	P	P::99.95(15299)
S1	37	F	N	N::99.94(15440)
S1	38	F	K	K::99.90(15898)
S1	39	F	D	D::99.85(15481)
S1	40	F	T	T::98.56(15899)
S1	41	F	W	W::99.88(16053)
S1	42	F	P	P::98.34(14933)
S1	43	F	D	D::98.40(15101)
S1	44	F	A	A::99.74(15496)
S1	45	F	N	N::99.95(15827)
S1	46	F	K	K::97.54(14905)
S1	47	F	V	V::99.84(15495)
S1	48	F	G	G::99.93(15652)
S1	49	F	A	A::99.53(15562)
S1	50	F	G	G::99.96(15683)
S1	51	F	A	A::99.92(15644)
S1	53	F	G	G::99.92(15538)
S1	54	F	L	L::99.43(14410)
S1	55	F	G	G::99.92(15057)
S1	57	F	T	T::99.72(15896)
S1	58	F	P	P::99.93(15237)
S1	59	F	P	P::99.88(15395)
S1	60	F	H	H::99.92(15720)
S1	61	F	G	G::99.91(15230)
S1	62	F	G	G::99.86(15254)
S1	63	F	L	L::99.51(15178)
S1	64	F	L	L::99.93(15254)
S1	65	F	G	G::99.87(15068)

S1	66	F	W	W::99.93(14702)
S1	67	F	S	S::99.87(13961)
S1	68	F	P	P::99.96(13921)
S1	69	F	Q	Q::99.82(14541)
S1	70	F	A	A::99.93(15143)
S1	71	F	Q	Q::99.88(15464)
S1	72	F	G	G::99.70(15303)
S1	73	F	I	I::99.89(15037)
S1	74	F	L	L::99.94(14094)
S1	75	F	Q	Q::99.69(15806)
S1	76	F	T	T::99.93(16263)
S1	77	F	L	L::99.37(15890)
S1	78	F	P	P::99.87(16373)
S1	79	F	A	A::99.27(16337)
S1	80	F	N	N::99.70(16700)
S1	81	F	P	P::99.94(16022)
S1	82	F	P	P::97.53(15510)
S1	83	F	P	P::99.91(15033)
S1	84	F	A	A::98.25(12516)
S1	85	F	S	S::99.89(12724)
S1	86	F	T	T::99.91(12728)
S1	87	F	N	N::99.92(12288)
S1	88	F	R	R::99.71(12213)
S1	89	F	Q	Q::99.87(11566)
S1	90	F	S	S::99.85(10958)
S1	91	F	G	G::99.89(10925)
S1	92	F	R	R::99.93(10768)
S1	93	F	Q	Q::99.60(10523)
S1	94	F	P	P::99.72(9845)
S1	95	F	T	T::99.89(9863)
S1	96	F	P	P::99.93(9371)
S1	97	F	L	L::99.93(9371)
S1	98	F	S	S::99.91(9369)
S1	99	F	P	P::97.32(8985)
S1	100	F	P	P::99.94(9028)
S1	101	F	L	L::99.90(9119)
S1	102	F	R	R::99.84(8969)
S1	103	F	N	N::99.91(8454)
S1	104	F	T	T::99.91(8167)
S1	105	F	H	H::99.82(8159)
S1	106	F	P	P::99.95(7508)
S1	107	F	Q	Q::99.89(7428)
S1	108	F	A	A::99.90(7253)
S1	109	F	M	M::99.87(7148)
S1	110	F	Q	Q::98.99(6891)

Meta data	
Assembly file:	HBV-RYD-7.sam
Annotation file:	/home3/vatt01s/Work/Project-150-HBV/Data/P150-1/Annotation/HBV.anno
Reference file:	KX357637.fa.
User name	ales01a
Hostname	Alpha
Location	/home2/ales01a/HBV/P150-5/HBV-RYD-7
Date/Time	Tue 26 Mar 09:41:13 GMT 2019