HBV-RYD-51

File name	**HBV-RYD-51.sam**
Ref name	**KX357637.1 Hepatitis B virus isolate MK20ETH, complete genome**
Ref len	**3182**
Program used	**Tanoti Assembler 1.0**
Total reads	**1711294**
Mapped reads	**159296 (9.31%)**
Unmapped reads	**1551998**
Mapped loan pairs	**54**
Average read length	**147nt**
Coverage	**3182nt (100.00%)**
Average depth	**7471 reads/site**
Average insert length	**43nt**

COVERAGE

Coverage by reads

SHANNON ENTROPY

Entropy of the reads

1
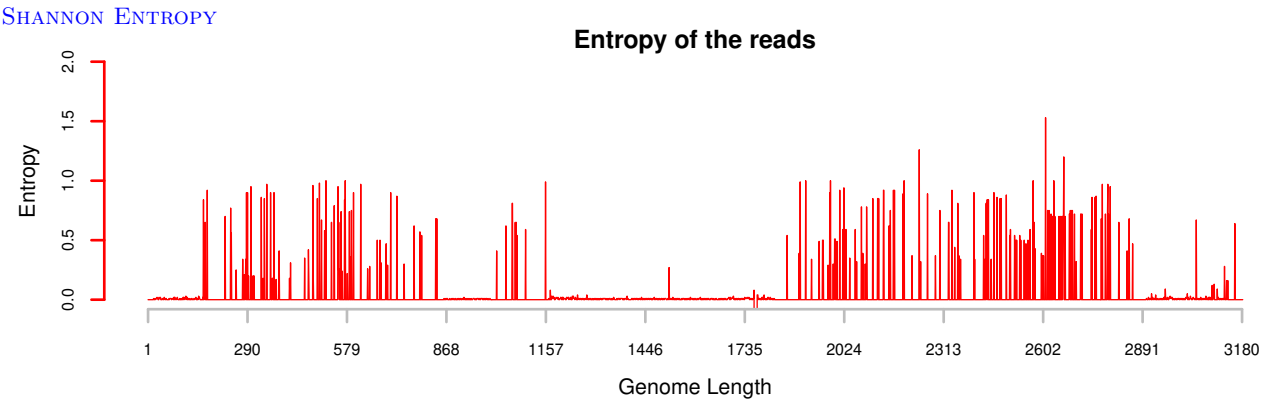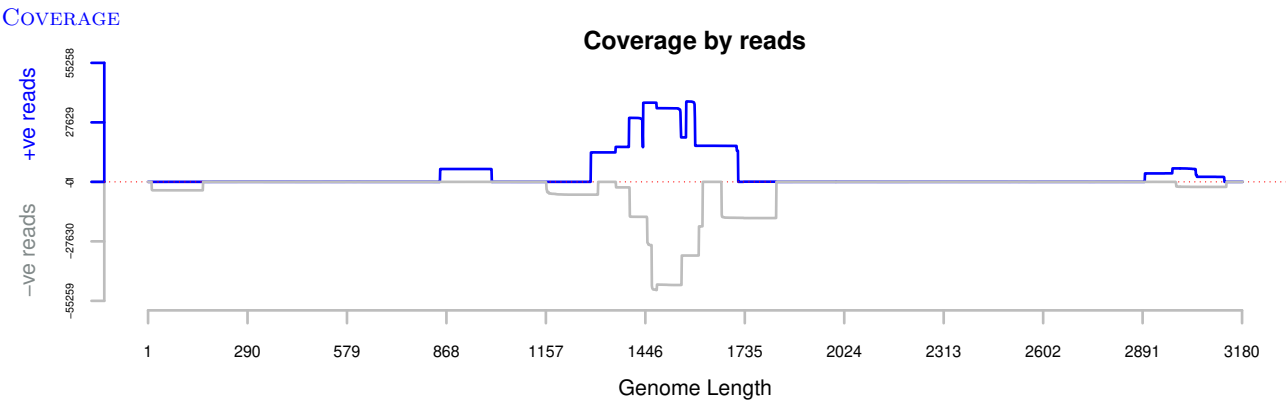
Consensus sequence

```
   1      CTCCACAACT TTCCACCAAA CTCTGCAAGA TCCCAGAGTG AGAGGCCTGT ATTTCCCTGC TGGTGGCTCC
  70      AGTTCAGGAA CAGTAAACCC TGTTCCGACT ACTGTCTCTC ACATATCGTC 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 ACCATGCAGA ACCTGCACGA CTCCTGCTCA AGGAACCTCT ATGTATCCCT
 560      CCTGTTGCTG TACCAAACCT TCGGACGGAA ATTGCACCTG TATTCCCATC CCATCATCCT GGGCTTTCGG
 630      AAAATTCCTA TGGGAGTGGG CCTCAGCCCG TTTCTCCTGG CTCAGTTTAC TAGTGCCATT TGTTCAGTGG
 700      TTCGTAGGGC TTTCCCCCAC TGTTTGGCTT TCAGTTATAT 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 AAGCAGGCTT TCACTTTCTC GCCAACTTAC AAGGCCTTTC
1120      TGTGTAAACA ATACCTGAAC CTTTACCCCG TTGCCCGGCA ACGGCCAGGT CTGTGCCAAG TGTTTGCTGA
1190      CGCAACCCCC ACTGGCTGGG GCTTGGTTAT GGGCCATCAG CGCGTGAGTG GAACCTTTTT GGCTCCTCTG
1260      CCGATCCATA CTGCGAAACT CCTAGCCGCT TGTTTTGCTC GCAGCAGGTC TGGAGCAAAC ATTATCGGGA
1330      CGGATAACTC TGTTGTTCTC TCCCGCAAAT ATACATCGTT TCCCTGGCTG CTAGGCTGTG CTGCCAACTG
1400      GATCCTGCGC GGGACGTCCT TTGTTTACGT CCCGTCGGCG CTGAATCCCG CGGACGACCC TTCCCGGGGC
1470      CGCTTGGGAC TTTCTCGTCC CCTTCTCCGT CTGCCGTTTC GACCGACCAC GGGGCGCACC TCTCTTTACG
1540      CGGACTCCCC GTCTGTGCCT TCTCATCTGC CGGACCGTGT GCACTTCGCT TCACCTCTGC ACGTCGCATG
1610      GAAACCACCG TGAACGCCCA CCAATTCTTG CCCAAGGTCT TACATAAGAG GACTCTTGGA CTCTCTGTAA
1680      TGTCAACGAC CGACCTTGAG GCATACTTCA AAGACTGTTT GTTTAAAGAC TGGGAGGAGT TGGGGGAGGA
1750      GATTAGATTA ATGGTGTTTG TATTAGGAGG CTGTAGGCAT AAATTGGTCT GCGCACCAGC ACCATGCAAC
1820      TTTTTCACCT CTGCCTAATC ATCTCTTGTT CATGTCCTAC TGTTCAAGCC TCCAAGCTGT GCCTTGGGTG
1890      GCTTTGGGGC ATGGACATTG ACCCTTATAA AGAATTTGGA GCTACTGTGG AGTTACTCTC GTTTTTGCCT
1960      TCTGACTTCT TTCCTTCAGT ACGAGATCTT CTAGATACCG CCTCAGCTCT ATATCGGGAA GCCTTAGAGT
2030      CTCCTGAGCA TTGTTCACCT CACCATACTG CACTCAGGCA AGCAATTCTT TGCTGGGGGG AACTAATGAC
2100      TCTAGCCACC TGGGTGGGTG GTAATTTGGA AGATCCAATA TCCAGGGACC TAGTAGTCAG TTATGTTAAC
2170      ACTAATATGG GCCTAAAGTT CAGGCAACTA TTGTGGTTTC ACATTTCTTG TCTCACTTTT GGAAGAGAAA
2240      CCGTCATAGA GTATTTGGTG TCTTTCGGAG TGTGGATTCG CACTCCTCCA GCTTATAGAC CACCAAATGC
2310      CCCTATCTTA TCAACACTTC CGGAGACTAC TGTTGTTAGA CGACGAGGCA GGTCCCCTAG AAGAAGAACT
2380      CCCTCGCCTC GCAGACGAAG GTCTCAATCG CCGCGTCGCA GAAGATCTCA ATCTCGGGAA TCTCAATGTT
2450      AGTATTCCTT GGACTCATAA GGTGGGCAAC TTTACGGGGC TTTATTCTTC TACTGTTCCT GTCTTTAACC
2520      CTCATTGGAA AACACCCTCT TTTCCTAATA TACATTTACA CCAAGACATT ATCAAAAAAT GTGAACAATT
2590      TGTAGGCCCA CTCACAGTCA ATGAGAAAAG AAGACTACAA TTGATTATGC CTGCTAGGTT TTATCCAAAT
2660      GTTACCAAAT ATTTGCCATT GGATAAGGGT ATTAAACCTT ATTATCCAGA ACATCTAGTT AATCATTACT
2730      TCCAAACCAG ACATTATTTA CACACTCTAT GGAAGGCGGG TATCTTATAT AAGAGAGAAA CAACACATAG
2800      CGCCTCATTT TGTGGGTCAC CATATTCTTG GGAACAAGAG CTACAGCATG GGGCAGAATC TTTCCACCAG
2870      CAATCCTCTG GGATTCTTTC CCGACCACCA GTTGGATCCA GCCTTCAGAG CAAACACCGC AAATCCAGAT
2940      TGGGACTTCA ATCCCACCAA GGACACCTGG CCGGACGCCA ACAAGGTAGG AGCTGGAGCA TTCGGGCTGG
3010      GATTCACCCC ACCGCACGGA GGCCTTCTGG GGTGGACCCC TCAGGCTCAG GGCATACTAC AAAACCTTGCC
3080      AGCAAATCCG CCTCCTGCTT CCACCAAGCG CCAGTCAGGA AGGCAGCCTA CCCCTCTGTC TCCACCTTTG
3150      AGAAACACGC ATCCTCAGGC CATGCAGTGG AA
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Genome Composition	
A	727 (22.85%)
T	906 (28.47%)
G	689 (21.65%)
C	860 (27.03%)
N	0 (0.00%)
Total Nucleotides	3182
GC%	48.68

Read quality

4
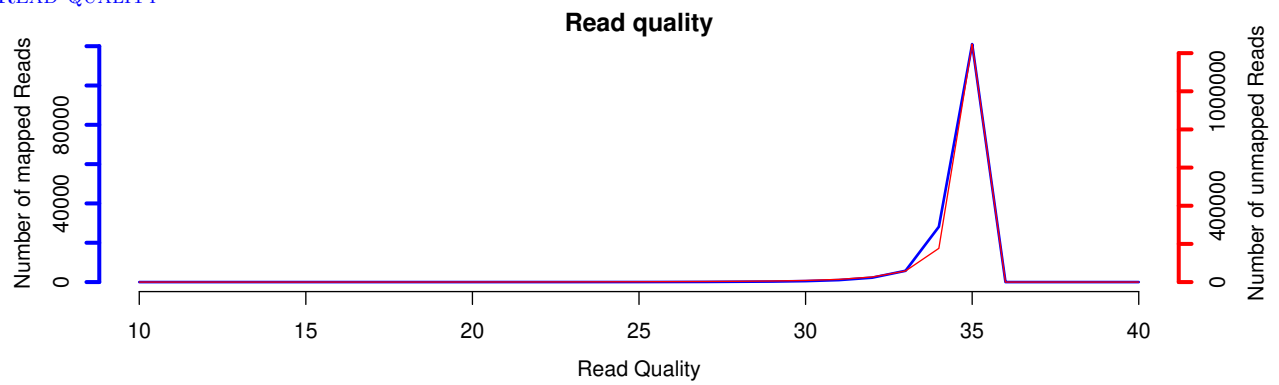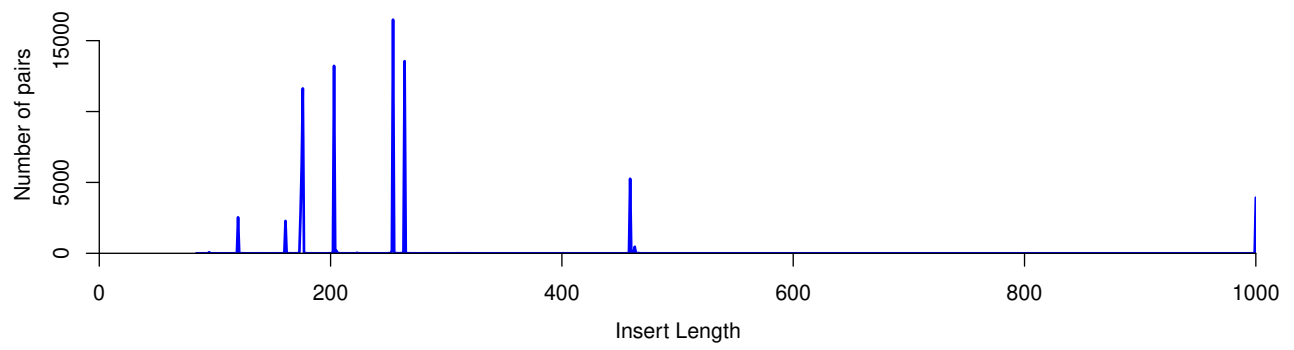
Amino acid variations

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::100.00(5)
P2	2	F	N	N::100.00(5)
P2	4	F	P	P::100.00(3910)
P2	5	F	P	P::99.95(3918)
P2	6	F	N	N::100.00(3924)
P2	7	F	S	S::99.95(3924)
P2	8	F	A	A::99.82(3919)
P2	9	F	R	R::99.92(3923)
P2	10	F	S	S::99.97(3925)
P2	11	F	Q	Q::99.85(3917)
P2	12	F	S	S::99.80(3920)
P2	13	F	E	E::99.97(3927)
P2	14	F	R	R::99.92(3925)
P2	15	F	P	P::99.92(3925)
P2	16	F	V	V::99.95(3926)
P2	18	F	P	P::100.00(3929)
P2	19	F	C	C::99.97(3932)
P2	20	F	W	W::99.87(3929)
P2	21	F	W	W::99.77(3926)
P2	22	F	L	L::99.90(3931)
P2	23	F	Q	Q::99.90(3931)
P2	25	F	R	R::99.85(3930)
P2	26	F	N	N::99.87(3931)
P2	27	F	S	S::99.90(3932)
P2	28	F	K	K::99.75(3926)
P2	29	F	P	P::100.00(3937)
P2	30	F	C	C::99.92(3934)
P2	31	F	S	S::99.97(3937)
P2	32	F	D	D::99.90(3934)
P2	33	F	Y	Y::99.92(3935)
P2	34	F	C	C::99.87(3932)
P2	35	F	L	L::99.90(3933)
P2	36	F	S	S::99.75(3927)
P2	37	F	H	H::99.90(3933)
P2	38	F	I	I::99.85(3931)
P2	39	F	V	V::99.92(3934)
P2	40	F	N	N::99.92(3934)
P2	41	F	L	L::99.97(3936)
P2	42	F	L	L::99.92(3934)
P2	43	F	E	E::99.95(3934)
P2	44	F	D	D::99.92(3933)
P2	45	F	W	W::99.85(3928)
P2	46	F	G	G::99.80(3928)
P2	47	F	P	P::99.92(3931)
P2	48	F	C	C::99.90(3930)
P2	49	F	A	A::99.69(3922)

P2	50	F	E	E::99.95(3933)
P2	51	F	H	H::100.00(3936)
P2	52	F	G	G::100.00(3926)
P2	53	F	E	E::60.00(9) K::40.00(6)
P2	54	F	H	H::100.00(13)
P2	55	F	H	H::83.33(10) S::16.67(2)
P2	56	F	I	I::100.00(9)
P2	57	F	R	R::66.67(6) K::33.33(3)
P2	58	F	I	I::100.00(9)
P2	59	F	P	P::100.00(9)
P2	60	F	R	R::100.00(8)
P2	61	F	T	T::100.00(9)
P2	62	F	P	P::100.00(20)
P2	63	F	A	A::100.00(21)
P2	64	F	R	R::100.00(20)
P2	65	F	V	V::100.00(20)
P2	66	F	T	T::100.00(20)
P2	67	F	G	G::100.00(20)
P2	68	F	G	G::100.00(20)
P2	69	F	V	V::100.00(21)
P2	71	F	L	L::100.00(20)
P2	72	F	V	V::100.00(20)
P2	73	F	D	D::100.00(20)
P2	74	F	K	K::100.00(21)
P2	75	F	N	N::100.00(21)
P2	76	F	P	P::100.00(23)
P2	77	F	H	H::100.00(22)
P2	78	F	N	N::100.00(22)
P2	79	F	T	T::100.00(22)
P2	80	F	A	A::77.27(17) S::22.73(5)
P2	81	F	E	E::100.00(23)
P2	82	F	S	S::100.00(23)
P2	83	F	R	R::100.00(24)
P2	84	F	L	L::100.00(24)
P2	85	F	V	V::95.83(23)
P2	86	F	V	V::100.00(25)
P2	87	F	D	D::100.00(28)
P2	89	F	S	S::100.00(28)
P2	90	F	Q	Q::100.00(30)
P2	91	F	F	F::93.75(30) L::6.25(2)
P2	92	F	S	S::100.00(30)
P2	93	F	R	R::96.77(30)
P2	94	F	G	G::96.88(31)
P2	95	F	N	N::68.75(22) S::31.25(10)
P2	96	F	Y	Y::68.75(22) S::31.25(10)
P2	97	F	R	R::96.88(31)
P2	98	F	V	V::100.00(34)
P2	99	F	S	S::100.00(33)
P2	100	F	W	W::100.00(31)
P2	101	F	P	P::100.00(32)
P2	102	F	K	K::100.00(33)

P2	104	F	A	A::100.00(32)
P2	105	F	V	V::100.00(33)
P2	106	F	P	P::100.00(32)
P2	107	F	N	N::100.00(33)
P2	108	F	L	L::100.00(34)
P2	109	F	Q	Q::100.00(35)
P2	110	F	S	S::100.00(35)
P2	111	F	L	L::97.37(37)
P2	112	F	T	T::100.00(30)
P2	113	F	N	N::100.00(29)
P2	114	F	L	L::100.00(30)
P2	115	F	L	L::100.00(30)
P2	116	F	S	S::100.00(37)
P2	117	F	S	S::100.00(37)
P2	118	F	N	N::100.00(38)
P2	119	F	L	L::97.37(37)
P2	120	F	S	S::97.37(37)
P2	121	F	W	W::100.00(38)
P2	122	F	L	L::100.00(38)
P2	123	F	S	S::100.00(38)
P2	124	F	L	L::97.37(37)
P2	125	F	D	D::100.00(37)
P2	126	F	V	V::100.00(37)
P2	127	F	S	S::91.89(34) T::8.11(3)
P2	128	F	A	A::100.00(37)
P2	129	F	A	A::100.00(36)
P2	131	F	Y	Y::100.00(36)
P2	132	F	H	H::100.00(36)
P2	133	F	L	L::100.00(36)
P2	134	F	P	P::100.00(37)
P2	135	F	L	L::100.00(37)
P2	136	F	H	H::100.00(36)
P2	137	F	P	P::97.22(35)
P2	138	F	A	A::94.44(34) S::5.56(2)
P2	139	F	A	A::100.00(36)
P2	140	F	M	M::100.00(33)
P2	141	F	P	P::100.00(32)
P2	142	F	H	H::100.00(31)
P2	143	F	L	L::100.00(31)
P2	144	F	L	L::100.00(30)
P2	145	F	V	V::100.00(30)
P2	146	F	G	G::100.00(31)
P2	147	F	S	S::100.00(30)
P2	148	F	S	S::100.00(30)
P2	149	F	G	G::100.00(31)
P2	150	F	L	L::100.00(29)
P2	151	F	S	S::100.00(30)
P2	152	F	R	R::100.00(30)
P2	153	F	Y	Y::100.00(33)
P2	154	F	V	V::100.00(30)
P2	155	F	A	A::93.33(28)

P2	156	F	R	R::100.00(30)
P2	157	F	L	L::100.00(29)
P2	158	F	S	S::100.00(29)
P2	159	F	S	S::100.00(28)
P2	160	F	N	N::96.55(28)
P2	161	F	S	S::100.00(29)
P2	162	F	R	R::100.00(27)
P2	163	F	I	I::100.00(28)
P2	164	F	F	F::72.73(16) I::27.27(6)
P2	165	F	N	N::100.00(23)
P2	166	F	H	H::59.09(13) N::40.91(9)
P2	167	F	Q	Q::100.00(23)
P2	168	F	H	H::82.61(19) Y::17.39(4)
P2	169	F	G	G::100.00(25)
P2	170	F	T	T::100.00(26)
P2	171	F	M	M::86.21(25) L::13.79(4)
P2	172	F	Q	Q::51.72(15) P::48.28(14)
P2	173	F	N	N::100.00(29)
P2	174	F	L	L::100.00(28)
P2	175	F	H	H::100.00(28)
P2	176	F	D	D::100.00(28)
P2	177	F	S	S::100.00(24)
P2	178	F	C	C::100.00(24)
P2	179	F	S	S::100.00(24)
P2	180	F	R	R::83.33(20) K::12.50(3)
P2	181	F	N	N::100.00(24)
P2	182	F	L	L::100.00(24)
P2	183	F	Y	Y::100.00(24)
P2	184	F	V	V::56.52(13) I::39.13(9)
P2	185	F	S	S::95.65(22)
P2	186	F	L	L::100.00(23)
P2	187	F	L	L::79.17(19) M::20.83(5)
P2	188	F	L	L::100.00(26)
P2	189	F	L	L::100.00(26)
P2	190	F	Y	Y::73.08(19) F::26.92(7)
P2	191	F	Q	Q::53.85(14) K::46.15(12)
P2	192	F	T	T::100.00(29)
P2	194	F	G	G::100.00(29)
P2	195	F	R	R::78.57(22) W::21.43(6)
P2	196	F	K	K::100.00(28)
P2	197	F	L	L::100.00(28)
P2	198	F	H	H::100.00(25)
P2	199	F	L	L::100.00(25)
P2	200	F	Y	Y::100.00(23)
P2	201	F	S	S::100.00(23)
P2	202	F	H	H::100.00(22)
P2	203	F	P	P::100.00(24)
P2	204	F	I	I::100.00(25)
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P2	206	F	L	L::56.52(13) M::43.48(10)
P2	207	F	G	G::100.00(24)

P2	209	F	R	R::100.00(22)
P2	210	F	K	K::100.00(22)
P2	211	F	I	I::100.00(22)
P2	212	F	P	P::100.00(22)
P2	213	F	M	M::100.00(23)
P2	214	F	G	G::100.00(21)
P2	215	F	V	V::100.00(21)
P2	216	F	G	G::100.00(20)
P2	217	F	L	L::100.00(20)
P2	218	F	S	S::100.00(21)
P2	219	F	P	P::100.00(20)
P2	221	F	L	L::100.00(18)
P2	222	F	L	L::100.00(18)
P2	223	F	A	A::100.00(18)
P2	224	F	Q	Q::100.00(18)
P2	226	F	T	T::100.00(18)
P2	227	F	S	S::100.00(18)
P2	228	F	A	A::100.00(18)
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P2	230	F	C	C::95.00(19) Y::5.00(1)
P2	231	F	S	S::100.00(20)
P2	232	F	V	V::95.00(19) M::5.00(1)
P2	233	F	V	V::100.00(20)
P2	234	F	R	R::100.00(19)
P2	235	F	R	R::100.00(19)
P2	236	F	A	A::100.00(18)
P2	238	F	P	P::100.00(18)
P2	239	F	H	H::100.00(18)
P2	240	F	C	C::100.00(17)
P2	241	F	L	L::100.00(17)
P2	242	F	A	A::100.00(19)
P2	244	F	S	S::100.00(19)
P2	245	F	Y	Y::100.00(19)
P2	246	F	M	M::100.00(19)
P2	247	F	D	D::100.00(19)
P2	248	F	D	D::94.74(18) Y::5.26(1)
P2	249	F	V	V::100.00(19)
P2	250	F	V	V::100.00(17)
P2	251	F	L	L::100.00(18)
P2	252	F	G	G::100.00(15)
P2	253	F	A	A::100.00(15)
P2	254	F	K	K::100.00(15)
P2	255	F	S	S::100.00(15)
P2	256	F	V	V::100.00(15)
P2	257	F	Q	Q::100.00(13)
P2	258	F	H	H::100.00(13)
P2	259	F	L	L::100.00(14)
P2	260	F	E	E::100.00(14)
P2	261	F	S	S::100.00(14)
P2	262	F	L	L::100.00(15)
P2	263	F	F	F::86.67(13) Y::13.33(2)

P2	264	F	T	T::100.00(15)
P2	265	F	A	A::87.50(14) S::12.50(2)
P2	266	F	V	V::100.00(16)
P2	267	F	T	T::100.00(17)
P2	268	F	N	N::100.00(16)
P2	270	F	L	L::100.00(15)
P2	271	F	L	L::100.00(15)
P2	272	F	S	S::100.00(15)
P2	273	F	L	L::100.00(15)
P2	274	F	G	G::100.00(15)
P2	275	F	I	I::100.00(15)
P2	276	F	H	H::100.00(12)
P2	277	F	L	L::100.00(13)
P2	278	F	N	N::100.00(11)
P2	279	F	P	P::100.00(11)
P2	280	F	N	N::100.00(10)
P2	281	F	K	K::100.00(10)
P2	282	F	T	T::100.00(10)
P2	283	F	K	K::100.00(5969)
P2	284	F	R	R::99.97(5969)
P2	285	F	W	W::99.98(5972)
P2	286	F	G	G::99.95(5968)
P2	287	F	Y	Y::99.95(5968)
P2	288	F	S	S::99.95(5968)
P2	289	F	L	L::99.98(5970)
P2	290	F	H	H::99.90(5965)
P2	292	F	M	M::99.90(5966)
P2	293	F	G	G::99.93(5968)
P2	294	F	Y	Y::99.93(5968)
P2	295	F	V	V::99.90(5967)
P2	296	F	I	I::99.95(5970)
P2	297	F	G	G::99.95(5967)
P2	298	F	C	C::99.92(5966)
P2	299	F	Y	Y::99.95(5967)
P2	300	F	G	G::99.95(5968)
P2	301	F	S	S::99.95(5968)
P2	302	F	L	L::99.90(5965)
P2	303	F	P	P::99.92(5967)
P2	304	F	Q	Q::99.90(5966)
P2	305	F	D	D::99.92(5967)
P2	306	F	H	H::99.85(5962)
P2	307	F	I	I::99.93(5967)
P2	308	F	I	I::99.88(5964)
P2	309	F	Q	Q::99.92(5966)
P2	310	F	K	K::99.90(5965)
P2	311	F	I	I::99.92(5966)
P2	312	F	K	K::99.98(5970)
P2	313	F	E	E::99.95(5967)
P2	314	F	C	C::99.95(5966)
P2	316	F	R	R::99.95(5965)
P2	317	F	K	K::99.93(5965)

P2	318	F	L	L::99.95(5965)
P2	319	F	P	P::99.88(5962)
P2	320	F	V	V::99.92(5963)
P2	321	F	N	N::99.92(5963)
P2	322	F	R	R::99.90(5962)
P2	323	F	P	P::99.85(5959)
P2	324	F	I	I::99.95(5966)
P2	325	F	D	D::99.90(5964)
P2	326	F	W	W::99.85(5960)
P2	327	F	K	K::99.93(5965)
P2	328	F	V	V::99.88(5958)
P2	329	F	C	C::99.92(5960)
P2	330	F	Q	Q::99.98(5961)
P2	331	F	R	R::99.80(5949)
P2	332	F	I	I::100.00(5887)
P2	333	F	V	V::100.00(13)
P2	334	F	G	G::100.00(12)
P2	335	F	L	L::100.00(12)
P2	336	F	L	L::100.00(12)
P2	337	F	G	G::100.00(12)
P2	339	F	A	A::100.00(12)
P2	340	F	A	A::100.00(13)
P2	341	F	P	P::100.00(13)
P2	343	F	T	T::100.00(14)
P2	344	F	Q	Q::100.00(14)
P2	345	F	C	C::100.00(13)
P2	346	F	G	G::100.00(13)
P2	347	F	Y	Y::100.00(13)
P2	348	F	P	P::100.00(13)
P2	349	F	A	A::100.00(11)
P2	350	F	L	L::100.00(11)
P2	351	F	M	M::100.00(9)
P2	352	F	P	P::100.00(8)
P2	353	F	L	L::100.00(7)
P2	354	F	Y	Y::100.00(7)
P2	355	F	A	A::100.00(6)
P2	356	F	C	C::100.00(6)
P2	357	F	I	I::87.50(7) T::12.50(1)
P2	358	F	Q	Q::100.00(8)
P2	359	F	S	S::100.00(8)
P2	360	F	K	K::100.00(7)
P2	361	F	Q	Q::100.00(7)
P2	362	F	A	A::100.00(7)
P2	364	F	T	T::100.00(7)
P2	366	F	S	S::100.00(7)
P2	367	F	P	P::100.00(7)
P2	368	F	T	T::100.00(7)
P2	369	F	Y	Y::100.00(7)
P2	370	F	K	K::100.00(7)
P2	371	F	A	A::100.00(7)
P2	373	F	L	L::100.00(6)

P2	374	F	C	C::100.00(5)
P2	375	F	K	K::100.00(5)
P2	376	F	Q	Q::100.00(5)
P2	377	F	Y	Y::100.00(5)
P2	378	F	L	L::100.00(5)
P2	379	F	N	N::100.00(4)
P2	380	F	L	L::100.00(4)
P2	381	F	Y	Y::100.00(4)
P2	382	F	P	P::100.00(5)
P2	383	F	V	V::100.00(7)
P2	384	F	A	A::100.00(7)
P2	385	F	R	R::57.14(4) G::42.86(3)
P2	386	F	Q	Q::100.00(3550)
P2	387	F	R	R::100.00(4772)
P2	388	F	P	P::99.90(4765)
P2	389	F	G	G::99.94(5412)
P2	390	F	L	L::99.94(5420)
P2	391	F	C	C::99.64(5502)
P2	392	F	Q	Q::99.66(5521)
P2	393	F	V	V::99.71(5557)
P2	395	F	A	A::99.83(5712)
P2	396	F	D	D::99.88(5756)
P2	397	F	A	A::99.78(5795)
P2	398	F	T	T::99.93(5821)
P2	399	F	P	P::99.85(5826)
P2	400	F	T	T::99.71(5832)
P2	401	F	G	G::99.76(5859)
P2	402	F	W	W::99.74(5863)
P2	403	F	G	G::99.90(5899)
P2	404	F	L	L::99.85(5901)
P2	405	F	V	V::99.80(5905)
P2	406	F	M	M::99.61(5914)
P2	407	F	G	G::99.81(5934)
P2	408	F	H	H::99.82(5935)
P2	409	F	Q	Q::99.82(5936)
P2	410	F	R	R::99.93(5945)
P2	411	F	V	V::99.55(5922)
P2	412	F	S	S::99.58(5924)
P2	413	F	G	G::99.92(5944)
P2	414	F	T	T::99.76(5936)
P2	416	F	L	L::99.85(5923)
P2	417	F	A	A::99.80(5939)
P2	418	F	P	P::99.90(5946)
P2	419	F	L	L::99.95(5947)
P2	420	F	P	P::99.87(5943)
P2	421	F	I	I::99.87(5943)
P2	422	F	H	H::99.90(5945)
P2	423	F	T	T::99.92(5946)
P2	424	F	A	A::99.92(5946)
P2	425	F	K	K::99.53(5922)
P2	426	F	L	L::99.95(5946)

P2	427	F	L	L::99.97(5946)
P2	428	F	A	A::99.90(5943)
P2	429	F	A	A::99.95(19578)
P2	430	F	C	C::99.94(19600)
P2	432	F	A	A::99.84(19601)
P2	433	F	R	R::99.84(19601)
P2	434	F	S	S::99.91(19609)
P2	435	F	R	R::99.97(19610)
P2	436	F	S	S::99.94(13687)
P2	437	F	G	G::99.97(13689)
P2	438	F	A	A::99.91(13681)
P2	439	F	N	N::99.93(13683)
P2	440	F	I	I::99.91(13681)
P2	441	F	I	I::99.91(13680)
P2	442	F	G	G::99.90(13679)
P2	443	F	T	T::99.93(13686)
P2	444	F	D	D::99.93(13686)
P2	445	F	N	N::99.97(13691)
P2	446	F	S	S::99.97(13692)
P2	447	F	V	V::99.91(13683)
P2	448	F	V	V::99.96(13690)
P2	449	F	L	L::99.91(13684)
P2	450	F	S	S::99.94(13686)
P2	451	F	R	R::99.76(13659)
P2	452	F	K	K::99.96(13689)
P2	453	F	Y	Y::99.94(16238)
P2	454	F	T	T::99.94(18781)
P2	455	F	S	S::99.87(18778)
P2	457	F	P	P::99.95(18778)
P2	458	F	W	W::99.88(18773)
P2	459	F	L	L::99.90(18776)
P2	460	F	L	L::99.96(18782)
P2	461	F	G	G::99.95(18778)
P2	462	F	C	C::99.87(18765)
P2	463	F	A	A::99.84(18759)
P2	464	F	A	A::99.64(18721)
P2	465	F	N	N::99.93(18755)
P2	466	F	W	W::99.96(32248)
P2	467	F	I	I::99.97(45851)
P2	468	F	L	L::99.94(45884)
P2	469	F	R	R::99.88(45859)
P2	470	F	G	G::99.93(45878)
P2	471	F	T	T::99.89(45858)
P2	472	F	S	S::99.91(45866)
P2	474	F	V	V::99.92(45855)
P2	475	F	Y	Y::99.94(45802)
P2	476	F	V	V::99.85(45716)
P2	477	F	P	P::99.95(45464)
P2	478	F	S	S::99.83(45157)
P2	479	F	A	A::99.90(32288)
P2	480	F	L	L::99.92(52922)

P2	481	F	N	N::99.95(52980)
P2	482	F	P	P::99.91(52961)
P2	483	F	A	A::99.87(52945)
P2	484	F	D	D::99.93(65151)
P2	485	F	D	D::99.86(65867)
P2	486	F	P	P::99.92(66069)
P2	487	F	S	S::99.95(66068)
P2	488	F	R	R::99.92(84955)
P2	489	F	G	G::99.90(86513)
P2	490	F	R	R::99.78(86569)
P2	491	F	L	L::99.89(86659)
P2	492	F	G	G::99.92(84333)
P2	493	F	L	L::99.96(81857)
P2	494	F	S	S::99.95(81880)
P2	495	F	R	R::99.90(81857)
P2	496	F	P	P::99.97(81923)
P2	497	F	L	L::99.91(81868)
P2	498	F	L	L::99.90(81866)
P2	499	F	R	R::99.89(81873)
P2	500	F	L	L::99.94(81915)
P2	501	F	P	P::99.81(81825)
P2	503	F	R	R::99.93(81949)
P2	504	F	P	P::99.91(81957)
P2	505	F	T	T::99.92(81958)
P2	506	F	T	T::99.91(81955)
P2	507	F	G	G::99.93(82006)
P2	508	F	R	R::99.76(81857)
P2	509	F	T	T::99.89(81959)
P2	510	F	S	S::99.91(81973)
P2	511	F	L	L::99.94(81990)
P2	512	F	Y	Y::99.93(81975)
P2	513	F	A	A::99.89(81852)
P2	514	F	D	D::99.89(81494)
P2	515	F	S	S::99.92(80217)
P2	516	F	P	P::99.94(68491)
P2	517	F	S	S::99.92(54826)
P2	518	F	V	V::99.89(54809)
P2	519	F	P	P::99.88(54776)
P2	520	F	S	S::99.96(54818)
P2	521	F	H	H::99.91(54772)
P2	522	F	L	L::99.97(71524)
P2	523	F	P	P::99.84(71411)
P2	524	F	D	D::99.93(71462)
P2	525	F	R	R::99.82(71366)
P2	526	F	V	V::99.91(71413)
P2	527	F	H	H::99.91(71243)
P2	529	F	A	A::99.94(63725)
P2	530	F	S	S::99.93(50933)
P2	531	F	P	P::99.98(50942)
P2	532	F	L	L::99.96(50928)
P2	533	F	H	H::99.90(37397)

P2	534	F	V	V::99.88(37394)
P2	535	F	A	A::99.84(37383)
P2	536	F	W	W::99.95(37392)
P2	537	F	K	K::99.84(16735)
P2	538	F	P	P::99.95(16756)
S2	1	F	S	S::100.00(4)
S2	2	F	T	T::100.00(5)
S2	3	F	T	T::100.00(5)
S2	5	F	H	H::100.00(3913)
S2	6	F	Q	Q::99.95(3919)
S2	7	F	T	T::99.95(3923)
S2	8	F	L	L::99.92(3923)
S2	9	F	Q	Q::99.75(3916)
S2	10	F	D	D::99.90(3922)
S2	11	F	P	P::99.87(3918)
S2	12	F	R	R::99.85(3922)
S2	13	F	V	V::99.97(3927)
S2	14	F	R	R::99.95(3926)
S2	15	F	G	G::99.95(3926)
S2	16	F	L	L::99.77(3919)
S2	17	F	Y	Y::99.90(3924)
S2	19	F	P	P::100.00(3933)
S2	20	F	A	A::99.97(3933)
S2	21	F	G	G::99.90(3931)
S2	22	F	G	G::99.87(3930)
S2	23	F	S	S::99.95(3933)
S2	24	F	S	S::99.87(3930)
S2	25	F	S	S::99.92(3933)
S2	26	F	G	G::99.85(3930)
S2	27	F	T	T::99.95(3934)
S2	28	F	V	V::99.92(3933)
S2	29	F	N	N::99.80(3929)
S2	30	F	P	P::99.97(3936)
S2	31	F	V	V::99.92(3934)
S2	32	F	P	P::99.97(3937)
S2	33	F	T	T::99.95(3936)
S2	34	F	T	T::99.92(3935)
S2	35	F	V	V::99.82(3930)
S2	36	F	S	S::99.92(3934)
S2	37	F	H	H::99.62(3922)
S2	38	F	I	I::99.95(3935)
S2	39	F	S	S::99.95(3936)
S2	40	F	S	S::99.95(3935)
S2	41	F	I	I::99.95(3935)
S2	43	F	S	S::99.87(3931)
S2	44	F	R	R::99.97(3935)
S2	45	F	I	I::99.85(3930)
S2	46	F	G	G::99.87(3929)
S2	47	F	D	D::99.80(3928)
S2	48	F	P	P::99.92(3931)
S2	49	F	A	A::99.90(3930)

S2	50	F	L	L::99.77(3924)
S2	51	F	N	N::99.97(3934)
S2	52	F	M	M::99.97(3934)
S2	53	F	E	E::100.00(3926)
S2	54	F	N	N::71.43(10) S::28.57(4)
S2	55	F	I	I::84.62(11) T::15.38(2)
S2	56	F	T	T::81.82(9) A::18.18(2)
S2	57	F	S	S::100.00(9)
S2	58	F	G	G::66.67(6) R::33.33(3)
S2	60	F	L	L::100.00(9)
S2	61	F	G	G::100.00(9)
S2	62	F	P	P::100.00(9)
S2	63	F	L	L::100.00(20)
S2	64	F	L	L::100.00(19)
S2	65	F	V	V::100.00(20)
S2	66	F	L	L::100.00(20)
S2	67	F	Q	Q::100.00(20)
S2	68	F	A	A::100.00(20)
S2	69	F	G	G::100.00(20)
S2	72	F	L	L::100.00(20)
S2	73	F	L	L::100.00(20)
S2	74	F	T	T::100.00(21)
S2	75	F	R	R::80.95(17) K::19.05(4)
S2	76	F	I	I::100.00(22)
S2	77	F	L	L::100.00(23)
S2	78	F	T	T::100.00(22)
S2	79	F	I	I::100.00(22)
S2	80	F	P	P::100.00(22)
S2	81	F	Q	Q::86.36(19) P::13.64(3)
S2	82	F	S	S::100.00(23)
S2	83	F	L	L::100.00(23)
S2	84	F	D	D::100.00(24)
S2	85	F	S	S::100.00(24)
S2	86	F	W	W::95.83(23)
S2	87	F	W	W::100.00(25)
S2	88	F	T	T::100.00(28)
S2	89	F	S	S::100.00(28)
S2	90	F	L	L::100.00(28)
S2	91	F	N	N::100.00(31)
S2	92	F	F	F::93.33(28) Y::6.67(2)
S2	93	F	L	L::100.00(31)
S2	94	F	G	G::96.77(30)
S2	95	F	G	G::93.75(30)
S2	96	F	T	T::68.75(22) A::31.25(10)
S2	97	F	T	T::68.75(22) P::31.25(10)
S2	98	F	V	V::96.97(32)
S2	99	F	C	C::100.00(33)
S2	100	F	L	L::78.79(26) P::12.12(4) R::9.09(3)
S2	101	F	G	G::100.00(32)
S2	102	F	Q	Q::96.97(32)
S2	103	F	N	N::96.97(32)

S2	104	F	S	S::100.00(32)
S2	105	F	Q	Q::100.00(33)
S2	106	F	S	S::100.00(33)
S2	107	F	P	P::100.00(32)
S2	108	F	T	T::100.00(33)
S2	109	F	S	S::100.00(34)
S2	110	F	N	N::71.43(25) S::28.57(10)
S2	111	F	H	H::100.00(38)
S2	112	F	S	S::96.43(27)
S2	113	F	P	P::80.00(24) L::16.67(5)
S2	114	F	T	T::100.00(29)
S2	115	F	S	S::100.00(30)
S2	116	F	C	C::100.00(30)
S2	117	F	P	P::100.00(37)
S2	118	F	P	P::100.00(38)
S2	119	F	T	T::68.42(26) I::31.58(12)
S2	120	F	C	C::100.00(38)
S2	121	F	P	P::97.37(37)
S2	122	F	G	G::100.00(38)
S2	123	F	Y	Y::100.00(38)
S2	124	F	R	R::100.00(38)
S2	125	F	W	W::100.00(38)
S2	126	F	M	M::100.00(37)
S2	127	F	C	C::86.49(32) *::8.11(3) Y::5.41(2)
S2	128	F	L	L::100.00(37)
S2	129	F	R	R::100.00(37)
S2	130	F	R	R::100.00(37)
S2	132	F	I	I::100.00(36)
S2	133	F	I	I::100.00(36)
S2	135	F	L	L::100.00(37)
S2	137	F	I	I::100.00(36)
S2	138	F	L	L::100.00(36)
S2	139	F	L	L::100.00(36)
S2	140	F	L	L::100.00(34)
S2	141	F	C	C::100.00(32)
S2	142	F	L	L::100.00(32)
S2	143	F	I	I::100.00(31)
S2	145	F	L	L::100.00(30)
S2	146	F	L	L::100.00(31)
S2	147	F	V	V::100.00(32)
S2	148	F	L	L::100.00(30)
S2	149	F	L	L::100.00(30)
S2	150	F	D	D::100.00(30)
S2	151	F	Y	Y::100.00(29)
S2	152	F	Q	Q::93.33(28) R::6.67(2)
S2	153	F	G	G::100.00(32)
S2	154	F	M	M::100.00(33)
S2	155	F	L	L::100.00(30)
S2	156	F	P	P::93.33(28)
S2	157	F	V	V::100.00(30)
S2	158	F	C	C::100.00(29)

S2	159	F	P	P::100.00(27)
S2	160	F	L	L::75.00(21) Q::17.86(5)
S2	161	F	I	I::100.00(29)
S2	162	F	P	P::100.00(28)
S2	163	F	G	G::100.00(28)
S2	164	F	S	S::100.00(21)
S2	165	F	S	S::100.00(22)
S2	166	F	T	T::100.00(22)
S2	167	F	T	T::100.00(23)
S2	168	F	S	S::100.00(23)
S2	169	F	T	T::100.00(23)
S2	170	F	G	G::100.00(25)
S2	171	F	P	P::100.00(29)
S2	172	F	C	C::100.00(29)
S2	173	F	R	R::100.00(29)
S2	174	F	T	T::100.00(28)
S2	175	F	C	C::100.00(28)
S2	176	F	T	T::100.00(28)
S2	177	F	T	T::100.00(24)
S2	178	F	P	P::83.33(20) L::16.67(4)
S2	179	F	A	A::100.00(24)
S2	180	F	Q	Q::100.00(24)
S2	181	F	G	G::83.33(20) R::12.50(3)
S2	182	F	T	T::100.00(24)
S2	183	F	S	S::100.00(24)
S2	184	F	M	M::62.50(15) I::37.50(9)
S2	185	F	Y	Y::79.17(19) F::16.67(4)
S2	186	F	P	P::95.65(22)
S2	187	F	S	S::100.00(23)
S2	188	F	C	C::100.00(26)
S2	189	F	C	C::100.00(26)
S2	190	F	C	C::100.00(26)
S2	191	F	T	T::73.08(19) S::26.92(7)
S2	192	F	K	K::100.00(29)
S2	193	F	P	P::100.00(29)
S2	194	F	S	S::100.00(29)
S2	195	F	D	D::100.00(29)
S2	196	F	G	G::93.10(27) E::6.90(2)
S2	197	F	N	N::100.00(28)
S2	198	F	C	C::100.00(25)
S2	199	F	T	T::100.00(25)
S2	200	F	C	C::100.00(25)
S2	201	F	I	I::100.00(23)
S2	202	F	P	P::100.00(24)
S2	203	F	I	I::100.00(24)
S2	204	F	P	P::100.00(25)
S2	205	F	S	S::100.00(25)
S2	206	F	S	S::100.00(25)
S2	207	F	W	W::100.00(24)
S2	208	F	A	A::100.00(24)
S2	210	F	G	G::100.00(22)

S2	211	F	K	K::100.00(22)
S2	213	F	L	L::95.65(22)
S2	214	F	W	W::100.00(23)
S2	215	F	E	E::95.24(20)
S2	216	F	W	W::100.00(19)
S2	217	F	A	A::100.00(20)
S2	218	F	S	S::100.00(20)
S2	219	F	A	A::100.00(20)
S2	220	F	R	R::100.00(20)
S2	222	F	S	S::100.00(18)
S2	223	F	W	W::100.00(18)
S2	224	F	L	L::100.00(18)
S2	225	F	S	S::88.89(16) N::11.11(2)
S2	226	F	L	L::94.44(17) S::5.56(1)
S2	227	F	L	L::100.00(18)
S2	228	F	V	V::100.00(18)
S2	229	F	P	P::100.00(19)
S2	231	F	V	V::85.00(17) A::10.00(2) I::5.00(1)
S2	232	F	Q	Q::100.00(20)
S2	233	F	W	W::100.00(20)
S2	235	F	V	V::100.00(19)
S2	236	F	G	G::100.00(18)
S2	237	F	L	L::100.00(18)
S2	238	F	S	S::100.00(18)
S2	239	F	P	P::100.00(18)
S2	240	F	T	T::100.00(18)
S2	241	F	V	V::100.00(17)
S2	242	F	W	W::100.00(17)
S2	243	F	L	L::100.00(19)
S2	244	F	S	S::100.00(19)
S2	245	F	V	V::100.00(20)
S2	246	F	I	I::100.00(19)
S2	247	F	W	W::100.00(19)
S2	248	F	M	M::94.74(18) I::5.26(1)
S2	249	F	M	M::100.00(19)
S2	250	F	W	W::100.00(19)
S2	251	F	Y	Y::100.00(17)
S2	252	F	W	W::100.00(18)
S2	253	F	G	G::100.00(15)
S2	254	F	P	P::100.00(15)
S2	255	F	S	S::100.00(15)
S2	256	F	L	L::100.00(15)
S2	257	F	Y	Y::100.00(15)
S2	258	F	S	S::84.62(11) N::15.38(2)
S2	259	F	I	I::100.00(13)
S2	260	F	L	L::100.00(14)
S2	261	F	S	S::100.00(14)
S2	262	F	P	P::100.00(15)
S2	264	F	L	L::86.67(13) I::13.33(2)
S2	265	F	P	P::100.00(16)
S2	266	F	L	L::100.00(16)

S2	267	F	L	L::100.00(16)
S2	268	F	P	P::100.00(16)
S2	269	F	I	I::100.00(16)
S2	272	F	C	C::100.00(15)
S2	273	F	L	L::100.00(15)
S2	274	F	W	W::100.00(15)
S2	275	F	V	V::100.00(15)
S2	276	F	Y	Y::100.00(15)
X	1	F	L	L::99.88(18763)
X	2	F	A	A::99.90(18778)
X	3	F	A	A::99.88(18771)
X	4	F	R	R::99.95(18779)
X	5	F	L	L::99.93(18775)
X	6	F	C	C::99.83(18757)
X	7	F	C	C::99.66(18725)
X	8	F	Q	Q::99.87(18745)
X	9	F	L	L::99.97(18760)
X	10	F	D	D::99.96(45733)
X	11	F	P	P::99.99(45910)
X	12	F	A	A::99.85(45846)
X	13	F	R	R::99.93(45877)
X	14	F	D	D::99.91(45866)
X	15	F	V	V::99.85(45838)
X	16	F	L	L::99.83(45823)
X	17	F	C	C::99.90(45846)
X	18	F	L	L::99.97(45816)
X	19	F	R	R::99.87(45744)
X	20	F	P	P::99.97(45556)
X	21	F	V	V::99.80(45341)
X	22	F	G	G::99.95(32307)
X	23	F	A	A::99.92(52906)
X	24	F	E	E::99.94(52963)
X	25	F	S	S::99.90(52958)
X	26	F	R	R::99.89(52952)
X	27	F	G	G::99.87(64869)
X	28	F	R	R::99.91(65865)
X	29	F	P	P::99.92(66049)
X	31	F	P	P::99.90(66038)
X	32	F	G	G::99.97(86300)
X	33	F	P	P::99.90(86671)
X	34	F	L	L::99.86(86638)
X	35	F	G	G::99.93(86844)
X	36	F	T	T::99.92(81833)
X	38	F	S	S::99.93(81864)
X	39	F	S	S::99.89(81841)
X	40	F	P	P::99.94(81893)
X	41	F	S	S::99.93(81886)
X	42	F	P	P::99.95(81922)
X	43	F	S	S::99.92(81901)
X	44	F	A	A::99.75(81782)
X	45	F	V	V::99.91(81907)

X	46	F	S	S::99.95(81934)
X	47	F	T	T::99.90(81929)
X	48	F	D	D::95.26(78132)
X	49	F	H	H::99.92(81965)
X	50	F	G	G::99.92(81989)
X	51	F	A	A::99.93(81993)
X	52	F	H	H::99.90(81964)
X	53	F	L	L::99.90(81972)
X	54	F	S	S::99.92(81975)
X	55	F	L	L::99.94(81978)
X	56	F	R	R::99.89(81916)
X	57	F	G	G::99.90(81502)
X	58	F	L	L::99.92(81303)
X	59	F	P	P::99.94(68501)
X	60	F	V	V::99.91(54821)
X	61	F	C	C::99.83(54777)
X	62	F	A	A::99.84(54776)
X	64	F	S	S::99.91(54771)
X	65	F	S	S::99.93(71505)
X	66	F	A	A::99.82(71423)
X	67	F	G	G::99.91(71445)
X	68	F	P	P::99.96(71468)
X	69	F	C	C::99.91(71421)
X	70	F	A	A::99.89(71225)
X	71	F	L	L::99.93(71206)
X	72	F	R	R::99.94(70156)
X	74	F	T	T::99.95(50928)
X	75	F	S	S::99.96(50940)
X	76	F	A	A::99.91(50895)
X	77	F	R	R::99.88(37393)
X	78	F	R	R::99.83(37376)
X	79	F	M	M::99.92(37393)
X	80	F	E	E::99.90(16748)
X	81	F	T	T::99.95(16756)
X	82	F	T	T::99.92(16749)
X	83	F	V	V::99.89(16745)
X	84	F	N	N::99.94(16754)
X	85	F	A	A::99.90(16748)
X	86	F	H	H::99.92(16748)
X	87	F	Q	Q::99.96(16757)
X	89	F	L	L::99.91(16747)
X	90	F	P	P::99.93(16747)
X	91	F	K	K::99.90(16746)
X	92	F	V	V::99.95(16754)
X	93	F	L	L::99.95(16746)
X	94	F	H	H::99.93(16742)
X	95	F	K	K::99.95(16736)
X	96	F	R	R::99.93(16733)
X	97	F	T	T::99.96(16731)
X	98	F	L	L::99.96(16730)
X	99	F	G	G::99.96(31972)

X	100	F	L	L::99.98(33049)
X	101	F	S	S::99.94(33150)
X	102	F	V	V::99.93(33278)
X	103	F	M	M::99.89(33288)
X	104	F	S	S::99.95(33300)
X	105	F	T	T::99.89(33289)
X	106	F	T	T::99.75(33256)
X	107	F	D	D::99.76(33278)
X	108	F	L	L::99.93(33332)
X	109	F	E	E::99.81(33301)
X	110	F	A	A::99.61(33234)
X	111	F	Y	Y::99.87(33323)
X	113	F	K	K::99.85(31095)
X	114	F	D	D::99.90(31111)
X	115	F	C	C::99.86(16676)
X	116	F	L	L::99.93(16699)
X	118	F	K	K::99.80(16683)
X	119	F	D	D::99.84(16698)
X	120	F	W	W::99.86(16698)
X	121	F	E	E::99.84(16864)
X	122	F	E	E::99.81(16865)
X	123	F	L	L::99.88(16848)
X	124	F	G	G::99.89(16879)
X	125	F	E	E::99.76(16854)
X	126	F	E	E::99.86(16870)
X	127	F	I	I::99.93(16879)
X	128	F	R	R::99.88(16872)
X	129	F	L	L::99.90(16874)
X	130	F	M	K::65.70(159) I::33.47(81)
X	131	F	V	V::96.93(158)
X	133	F	V	V::96.43(162)
X	134	F	L	L::99.93(16792)
X	135	F	G	G::99.91(16878)
X	136	F	G	G::99.93(16884)
X	137	F	C	C::99.91(16880)
X	138	F	R	R::99.79(16860)
X	139	F	H	H::99.92(16883)
X	140	F	K	K::99.52(16814)
X	141	F	L	L::99.92(16883)
X	142	F	V	V::99.93(16884)
X	143	F	C	C::99.92(16883)
X	144	F	A	A::99.83(16867)
X	145	F	P	P::99.93(16883)
X	146	F	A	A::99.83(16869)
X	147	F	P	P::99.91(16881)
X	148	F	C	C::99.88(16874)
X	149	F	N	N::99.93(16882)
X	152	F	T	T::100.00(9)
X	153	F	S	S::100.00(9)
C	1	F	M	M::100.00(12)
C	2	F	D	D::100.00(14)

C	3	F	I	I::100.00(14)
C	4	F	D	D::100.00(15)
C	5	F	P	P::100.00(16)
C	6	F	Y	Y::100.00(16)
C	7	F	K	K::100.00(17)
C	8	F	E	E::100.00(17)
C	10	F	G	G::93.75(15) V::6.25(1)
C	11	F	A	A::100.00(15)
C	12	F	T	T::100.00(17)
C	13	F	V	V::100.00(18)
C	14	F	E	E::100.00(18)
C	15	F	L	L::100.00(17)
C	16	F	L	L::100.00(17)
C	17	F	S	S::100.00(18)
C	19	F	L	L::100.00(19)
C	20	F	P	P::100.00(18)
C	21	F	S	S::88.89(16) Q::11.11(2)
C	22	F	D	D::100.00(18)
C	25	F	P	P::100.00(20)
C	26	F	S	S::95.00(19) L::5.00(1)
C	27	F	V	V::100.00(20)
C	28	F	R	R::100.00(19)
C	29	F	D	D::100.00(19)
C	30	F	L	L::100.00(19)
C	31	F	L	L::94.74(18) Q::5.26(1)
C	32	F	D	D::100.00(15)
C	33	F	T	T::100.00(15)
C	34	F	A	A::100.00(19)
C	35	F	S	S::89.47(17) A::10.53(2)
C	36	F	A	A::100.00(19)
C	37	F	L	L::100.00(18)
C	38	F	Y	Y::100.00(14)
C	39	F	R	R::100.00(14)
C	40	F	E	E::85.71(12) D::14.29(2)
C	41	F	A	A::100.00(14)
C	42	F	L	L::100.00(13)
C	43	F	E	E::100.00(14)
C	44	F	S	S::100.00(15)
C	45	F	P	P::100.00(16)
C	46	F	E	E::100.00(16)
C	47	F	H	H::93.33(14) L::6.67(1)
C	48	F	C	C::100.00(13)
C	49	F	S	S::100.00(14)
C	50	F	P	P::100.00(14)
C	51	F	H	H::100.00(13)
C	52	F	H	H::100.00(14)
C	53	F	T	T::100.00(16)
C	54	F	A	A::93.75(15) S::6.25(1)
C	55	F	L	L::100.00(14)
C	56	F	R	R::100.00(14)
C	57	F	Q	Q::100.00(13)

C	58	F	A	A::100.00(13)
C	59	F	I	I::100.00(13)
C	60	F	L	L::92.31(12) F::7.69(1)
C	61	F	C	C::100.00(13)
C	62	F	W	W::100.00(12)
C	63	F	G	G::100.00(13)
C	64	F	E	E::91.67(11) K::8.33(1)
C	65	F	L	L::100.00(12)
C	66	F	M	M::100.00(10)
C	67	F	T	T::100.00(11)
C	68	F	L	L::100.00(11)
C	69	F	A	A::100.00(11)
C	70	F	T	T::100.00(11)
C	71	F	W	W::100.00(12)
C	72	F	V	V::100.00(13)
C	73	F	G	G::100.00(12)
C	74	F	G	G::72.73(8) V::27.27(3)
C	75	F	N	N::72.73(8) S::27.27(3)
C	76	F	L	L::100.00(12)
C	77	F	E	E::100.00(12)
C	78	F	D	D::100.00(12)
C	79	F	P	P::100.00(12)
C	80	F	I	I::66.67(8) A::33.33(4)
C	81	F	S	S::100.00(12)
C	82	F	R	R::100.00(12)
C	83	F	D	D::100.00(12)
C	84	F	L	L::100.00(13)
C	85	F	V	V::84.62(11) A::15.38(2)
C	86	F	V	V::100.00(12)
C	87	F	S	S::100.00(16)
C	88	F	Y	Y::100.00(15)
C	89	F	V	V::100.00(15)
C	90	F	N	N::100.00(15)
C	91	F	T	T::100.00(15)
C	92	F	N	N::100.00(14)
C	93	F	M	M::100.00(11)
C	94	F	G	G::100.00(11)
C	95	F	L	L::100.00(11)
C	96	F	K	K::100.00(13)
C	98	F	R	R::100.00(13)
C	99	F	Q	Q::69.23(9) *::30.77(4)
C	100	F	L	L::100.00(13)
C	101	F	L	L::100.00(14)
C	102	F	W	W::100.00(14)
C	104	F	H	H::100.00(12)
C	105	F	I	I::100.00(14)
C	106	F	S	S::100.00(14)
C	107	F	C	C::100.00(14)
C	108	F	L	L::100.00(14)
C	109	F	T	T::100.00(14)
C	111	F	G	G::100.00(17)

C	112	F	R	R::100.00(17)
C	113	F	E	E::100.00(17)
C	114	F	T	T::100.00(17)
C	115	F	V	V::100.00(16)
C	116	F	I	I::94.12(16) L::5.88(1)
C	117	F	E	E::100.00(17)
C	118	F	Y	Y::100.00(15)
C	119	F	L	L::100.00(15)
C	120	F	V	V::100.00(12)
C	121	F	S	S::100.00(13)
C	123	F	G	G::100.00(14)
C	124	F	V	V::100.00(14)
C	125	F	W	W::100.00(15)
C	126	F	I	I::100.00(14)
C	127	F	R	R::100.00(13)
C	128	F	T	T::100.00(13)
C	129	F	P	P::100.00(13)
C	130	F	P	P::92.86(13) Q::7.14(1)
C	131	F	A	A::100.00(14)
C	132	F	Y	Y::100.00(14)
C	133	F	R	R::100.00(14)
C	134	F	P	P::100.00(14)
C	135	F	P	P::100.00(14)
C	136	F	N	N::100.00(12)
C	137	F	A	A::100.00(12)
C	138	F	P	P::100.00(13)
C	139	F	I	I::100.00(13)
C	140	F	L	L::100.00(13)
C	141	F	S	S::100.00(12)
C	142	F	T	T::100.00(12)
C	143	F	L	L::83.33(10) T::16.67(2)
C	144	F	P	P::100.00(12)
C	145	F	E	E::100.00(12)
C	146	F	T	T::66.67(8) N::33.33(4)
C	147	F	T	T::100.00(12)
C	148	F	V	V::100.00(11)
C	149	F	V	V::90.91(10) I::9.09(1)
C	150	F	R	R::100.00(12)
C	151	F	R	R::100.00(12)
C	152	F	R	R::100.00(12)
C	153	F	G	G::92.86(13) C::7.14(1)
C	154	F	R	R::93.33(14) S::6.67(1)
C	155	F	S	S::100.00(16)
C	156	F	P	P::100.00(16)
C	157	F	R	R::100.00(16)
C	158	F	R	R::100.00(16)
C	159	F	R	R::100.00(16)
C	160	F	T	T::100.00(15)
C	161	F	P	P::100.00(15)
C	162	F	S	S::100.00(15)
C	163	F	P	P::100.00(15)

C	164	F	R	R::100.00(17)
C	165	F	R	R::100.00(16)
C	166	F	R	R::100.00(16)
C	167	F	R	R::100.00(16)
C	168	F	S	S::93.75(15) F::6.25(1)
C	169	F	Q	Q::100.00(16)
C	170	F	S	S::100.00(17)
C	171	F	P	P::100.00(17)
C	172	F	R	R::100.00(17)
C	173	F	R	R::100.00(16)
C	174	F	R	R::100.00(17)
C	175	F	R	R::100.00(17)
C	176	F	S	S::100.00(16)
C	177	F	Q	Q::87.50(14) K::12.50(2)
C	178	F	S	S::93.75(15) F::6.25(1)
C	179	F	R	R::75.00(12) P::25.00(4)
C	180	F	E	E::73.33(11) A::26.67(4)
C	181	F	S	S::100.00(15)
C	182	F	Q	Q::100.00(16)
P1	1	F	M	M::100.00(12)
P1	2	F	P	P::100.00(13)
P1	3	F	L	L::100.00(13)
P1	4	F	S	S::100.00(13)
P1	5	F	Y	Y::100.00(14)
P1	6	F	Q	Q::100.00(12)
P1	7	F	H	H::83.33(10) Q::16.67(2)
P1	8	F	F	F::83.33(10) L::16.67(2)
P1	9	F	R	R::100.00(12)
P1	10	F	R	R::100.00(12)
P1	11	F	L	L::66.67(8) I::33.33(4)
P1	12	F	L	L::100.00(12)
P1	13	F	L	L::100.00(11)
P1	14	F	L	L::100.00(11)
P1	15	F	D	D::100.00(12)
P1	16	F	D	D::75.00(9) E::25.00(3)
P1	17	F	E	E::92.86(13) D::7.14(1)
P1	18	F	A	A::100.00(14)
P1	19	F	G	G::93.75(15) A::6.25(1)
P1	20	F	P	P::100.00(16)
P1	21	F	L	L::100.00(16)
P1	22	F	E	E::100.00(16)
P1	23	F	E	E::100.00(16)
P1	24	F	E	E::100.00(16)
P1	25	F	L	L::100.00(16)
P1	26	F	P	P::100.00(15)
P1	27	F	R	R::100.00(15)
P1	28	F	L	L::100.00(15)
P1	29	F	A	A::100.00(16)
P1	30	F	D	D::100.00(16)
P1	31	F	E	E::100.00(16)
P1	32	F	G	G::68.75(11) D::31.25(5)

P1	33	F	L	L::93.75(15) F::6.25(1)
P1	34	F	N	N::100.00(17)
P1	35	F	R	R::100.00(17)
P1	36	F	R	R::100.00(17)
P1	37	F	V	V::100.00(16)
P1	38	F	A	A::100.00(16)
P1	39	F	E	E::100.00(17)
P1	40	F	D	D::100.00(17)
P1	41	F	L	L::100.00(16)
P1	42	F	N	N::100.00(16)
P1	43	F	L	L::93.75(15) F::6.25(1)
P1	44	F	G	G::75.00(12) Q::25.00(4)
P1	45	F	N	N::73.33(11) L::26.67(4)
P1	46	F	L	L::73.33(11) P::26.67(4)
P1	47	F	N	N::100.00(16)
P1	48	F	V	V::100.00(16)
P1	49	F	S	S::93.75(15) G::6.25(1)
P1	50	F	I	I::100.00(16)
P1	51	F	P	P::100.00(16)
P1	52	F	W	W::100.00(15)
P1	53	F	T	T::100.00(14)
P1	54	F	H	H::100.00(14)
P1	55	F	K	K::100.00(14)
P1	56	F	V	V::100.00(13)
P1	57	F	G	G::100.00(11)
P1	58	F	N	N::100.00(11)
P1	60	F	T	T::100.00(11)
P1	61	F	G	G::100.00(11)
P1	62	F	L	L::100.00(10)
P1	63	F	Y	Y::100.00(10)
P1	64	F	S	S::100.00(10)
P1	65	F	S	S::100.00(8)
P1	66	F	T	T::100.00(8)
P1	67	F	V	V::85.71(6) I::14.29(1)
P1	68	F	P	P::100.00(8)
P1	69	F	V	V::100.00(8)
P1	71	F	N	N::100.00(8)
P1	72	F	P	P::100.00(8)
P1	73	F	H	H::88.89(8) N::11.11(1)
P1	74	F	W	W::100.00(8)
P1	75	F	K	K::100.00(8)
P1	76	F	T	T::100.00(8)
P1	77	F	P	P::100.00(8)
P1	78	F	S	S::100.00(9)
P1	80	F	P	P::100.00(9)
P1	81	F	N	N::88.89(8) D::11.11(1)
P1	82	F	I	I::100.00(10)
P1	83	F	H	H::100.00(10)
P1	84	F	L	L::100.00(9)
P1	85	F	H	H::100.00(8)
P1	86	F	Q	Q::100.00(7)

P1	87	F	D	D::100.00(6)
P1	88	F	I	I::100.00(6)
P1	89	F	I	I::100.00(6)
P1	90	F	K	K::83.33(5) N::16.67(1)
P1	91	F	K	K::100.00(6)
P1	92	F	C	C::100.00(7)
P1	93	F	E	E::100.00(9)
P1	94	F	Q	Q::100.00(8)
P1	96	F	V	V::100.00(13)
P1	97	F	G	G::100.00(13)
P1	98	F	P	P::100.00(13)
P1	99	F	L	L::100.00(14)
P1	100	F	T	T::100.00(14)
P1	101	F	V	V::100.00(14)
P1	102	F	N	N::100.00(14)
P1	103	F	E	E::100.00(14)
P1	104	F	K	K::100.00(14)
P1	105	F	R	R::100.00(14)
P1	106	F	R	R::100.00(15)
P1	107	F	L	L::100.00(15)
P1	108	F	Q	Q::81.25(13) N::18.75(3)
P1	109	F	L	L::100.00(16)
P1	110	F	I	I::81.25(13) V::18.75(3)
P1	111	F	M	M::100.00(16)
P1	112	F	P	P::100.00(16)
P1	113	F	A	A::100.00(16)
P1	114	F	R	R::100.00(16)
P1	116	F	Y	Y::81.25(13) F::18.75(3)
P1	117	F	P	P::100.00(16)
P1	118	F	N	N::81.25(13) I::18.75(3)
P1	119	F	V	V::68.75(11) S::18.75(3) G::12.50(2)
P1	120	F	T	T::100.00(16)
P1	121	F	K	K::100.00(16)
P1	122	F	Y	Y::100.00(16)
P1	123	F	L	L::100.00(15)
P1	124	F	P	P::100.00(15)
P1	125	F	L	L::100.00(14)
P1	126	F	D	D::78.57(11) E::21.43(3)
P1	127	F	K	K::100.00(14)
P1	128	F	G	G::100.00(14)
P1	129	F	I	I::100.00(15)
P1	130	F	K	K::100.00(17)
P1	131	F	P	P::94.12(16) H::5.88(1)
P1	132	F	Y	Y::100.00(16)
P1	133	F	Y	Y::100.00(15)
P1	134	F	P	P::100.00(15)
P1	135	F	E	E::80.00(12) D::20.00(3)
P1	136	F	H	H::80.00(12) N::20.00(3)
P1	137	F	L	L::80.00(12) V::20.00(3)
P1	138	F	V	V::100.00(15)
P1	139	F	N	N::100.00(15)

P1	140	F	H	H::100.00(15)
P1	141	F	Y	Y::100.00(14)
P1	143	F	Q	Q::100.00(11)
P1	144	F	T	T::100.00(10)
P1	145	F	R	R::100.00(7)
P1	146	F	H	H::85.71(6) N::14.29(1)
P1	147	F	Y	Y::100.00(7)
P1	148	F	L	L::100.00(7)
P1	149	F	H	H::100.00(7)
P1	150	F	T	T::100.00(11)
P1	151	F	L	L::100.00(11)
P1	152	F	W	W::100.00(11)
P1	153	F	K	K::100.00(11)
P1	154	F	A	A::100.00(11)
P1	155	F	G	G::100.00(10)
P1	156	F	I	I::100.00(10)
P1	157	F	L	L::100.00(10)
P1	158	F	Y	Y::100.00(10)
P1	159	F	K	K::100.00(10)
P1	160	F	R	R::100.00(10)
P1	161	F	E	E::100.00(10)
P1	162	F	T	T::60.00(6) S::40.00(4)
P1	163	F	T	T::100.00(10)
P1	164	F	H	H::63.64(7) R::36.36(4)
P1	165	F	S	S::100.00(11)
P1	166	F	A	A::100.00(11)
P1	167	F	S	S::100.00(11)
P1	169	F	C	C::100.00(11)
P1	170	F	G	G::100.00(11)
P1	171	F	S	S::100.00(12)
P1	172	F	P	P::100.00(12)
P1	173	F	Y	Y::100.00(11)
P1	174	F	S	S::100.00(11)
P1	175	F	W	W::100.00(11)
P1	176	F	E	E::100.00(11)
P1	177	F	Q	Q::100.00(11)
P1	178	F	E	E::100.00(14)
P1	179	F	L	L::100.00(12)
P1	180	F	Q	Q::91.67(11) H::8.33(1)
P1	181	F	H	H::100.00(12)
P1	182	F	G	G::100.00(11)
P1	183	F	A	A::100.00(11)
P1	184	F	E	E::100.00(11)
P1	185	F	S	S::100.00(11)
P1	186	F	F	F::90.00(9) L::10.00(1)
P1	187	F	H	H::100.00(10)
P1	188	F	Q	Q::100.00(10)
P1	189	F	Q	Q::100.00(10)
P1	190	F	S	S::100.00(10)
P1	191	F	S	S::100.00(10)
P1	192	F	G	G::100.00(10)

P1	193	F	I	I::100.00(10)
P1	194	F	L	L::100.00(10)
P1	195	F	S	S::100.00(10)
P1	196	F	R	R::100.00(10)
P1	197	F	P	P::100.00(10)
P1	198	F	P	P::100.00(3924)
P1	199	F	V	V::99.90(3924)
P1	200	F	G	G::99.95(3925)
P1	201	F	S	S::99.85(3921)
P1	202	F	S	S::99.95(3925)
P1	203	F	L	L::99.90(3923)
P1	204	F	Q	Q::99.39(3903)
P1	205	F	S	S::99.72(3916)
P1	206	F	K	K::99.92(3924)
P1	207	F	H	H::99.90(3923)
P1	208	F	R	R::99.54(3909)
P1	209	F	K	K::99.97(3926)
P1	210	F	S	S::99.92(3924)
P1	211	F	R	R::99.97(3926)
P1	212	F	L	L::99.90(3924)
P1	213	F	G	G::99.92(3924)
P1	214	F	L	L::99.97(3926)
P1	215	F	Q	Q::99.85(3921)
P1	216	F	S	S::99.75(3917)
P1	217	F	H	H::99.72(3914)
P1	218	F	Q	Q::99.85(3958)
P1	219	F	G	G::99.92(3961)
P1	220	F	H	H::99.85(3958)
P1	221	F	L	L::99.85(3957)
P1	222	F	A	A::99.65(3950)
P1	223	F	G	G::99.70(3952)
P1	224	F	R	R::99.70(3952)
P1	225	F	Q	Q::99.97(6260)
P1	226	F	Q	Q::99.90(6253)
P1	227	F	G	G::99.92(6252)
P1	228	F	R	R::99.92(6575)
P1	229	F	S	S::99.87(8428)
P1	230	F	W	W::99.74(8438)
P1	231	F	S	S::99.91(8503)
P1	232	F	I	I::99.93(8506)
P1	233	F	R	R::99.80(8497)
P1	234	F	A	A::99.91(8489)
P1	235	F	G	G::99.91(8494)
P1	236	F	I	I::99.91(8494)
P1	237	F	H	H::99.82(8478)
P1	238	F	P	P::99.87(8478)
P1	239	F	T	T::99.59(8434)
P1	240	F	A	A::99.80(8410)
P1	241	F	R	R::99.88(8406)
P1	242	F	R	R::99.73(8402)
P1	243	F	P	P::99.95(8365)

P1	244	F	S	S::99.86(8313)
P1	245	F	G	G::99.92(8320)
P1	246	F	V	V::99.95(8246)
P1	247	F	D	D::82.77(4598) E::17.16(953)
P1	248	F	P	P::99.94(4686)
P1	249	F	S	S::99.94(4686)
P1	250	F	G	G::99.96(4687)
P1	251	F	S	S::99.94(4687)
P1	252	F	G	G::99.85(4683)
P1	253	F	H	H::99.96(4688)
P1	254	F	T	T::99.87(4681)
P1	255	F	T	T::99.77(4676)
P1	256	F	N	N::100.00(4687)
P1	257	F	L	L::99.72(4672)
P1	258	F	A	A::99.85(4680)
P1	259	F	S	S::99.83(4679)
P1	260	F	K	K::99.81(4679)
P1	261	F	S	S::99.87(4680)
P1	262	F	A	A::99.85(4679)
P1	263	F	S	S::98.38(4610)
P1	264	F	C	C::99.66(4670)
P1	266	F	H	H::99.96(4682)
P1	267	F	Q	Q::99.96(4646)
P1	268	F	A	A::98.90(4597)
P1	269	F	P	P::99.81(4639)
P1	270	F	V	V::99.94(4645)
P1	271	F	R	R::99.89(4643)
P1	272	F	K	K::99.91(4642)
P1	273	F	A	A::99.83(4606)
P1	274	F	A	A::99.84(4473)
P1	275	F	Y	Y::95.06(2231)
P1	276	F	P	P::100.00(2344)
P1	277	F	S	S::97.73(43)
P1	278	F	V	V::97.73(43)
P1	279	F	S	S::100.00(43)
P1	280	F	T	T::100.00(43)
P1	282	F	E	E::100.00(42)
P1	283	F	K	K::100.00(42)
P1	284	F	H	H::100.00(42)
P1	285	F	A	A::88.10(37) S::7.14(3)
P1	286	F	S	S::100.00(42)
P1	287	F	S	S::100.00(42)
P1	288	F	G	G::100.00(42)
P1	289	F	H	H::100.00(42)
P1	290	F	A	A::100.00(41)
P1	291	F	V	V::100.00(4)
S1	1	F	M	M::100.00(12)
S1	2	F	G	G::81.82(9) E::18.18(2)
S1	3	F	Q	Q::100.00(11)
S1	4	F	N	N::100.00(11)
S1	5	F	L	L::100.00(10)

S1	6	F	S	S::100.00(10)
S1	7	F	T	T::100.00(10)
S1	8	F	S	S::100.00(10)
S1	9	F	N	N::100.00(10)
S1	10	F	P	P::100.00(10)
S1	11	F	L	L::100.00(10)
S1	12	F	G	G::100.00(10)
S1	15	F	P	P::100.00(10)
S1	16	F	D	D::100.00(10)
S1	17	F	H	H::100.00(10)
S1	18	F	Q	Q::100.00(3925)
S1	19	F	L	L::99.77(3920)
S1	20	F	D	D::99.95(3925)
S1	21	F	P	P::99.77(3918)
S1	22	F	A	A::99.95(3925)
S1	24	F	R	R::99.39(3903)
S1	25	F	A	A::99.75(3917)
S1	26	F	N	N::99.95(3925)
S1	27	F	T	T::99.92(3924)
S1	28	F	A	A::99.62(3912)
S1	29	F	N	N::99.95(3925)
S1	30	F	P	P::99.90(3924)
S1	31	F	D	D::100.00(3927)
S1	32	F	W	W::99.87(3923)
S1	33	F	D	D::99.85(3921)
S1	35	F	N	N::99.77(3918)
S1	36	F	P	P::99.69(3914)
S1	37	F	T	T::98.79(3915)
S1	38	F	K	K::99.95(3962)
S1	39	F	D	D::99.77(3955)
S1	40	F	T	T::99.95(3961)
S1	41	F	W	W::99.72(3952)
S1	42	F	P	P::99.62(3949)
S1	43	F	D	D::99.72(3953)
S1	44	F	A	A::99.75(3954)
S1	45	F	N	N::99.92(6257)
S1	46	F	K	K::99.92(6254)
S1	47	F	V	V::99.82(6245)
S1	48	F	G	G::99.95(8361)
S1	49	F	A	A::99.91(8454)
S1	50	F	G	G::99.85(8490)
S1	51	F	A	A::99.88(8503)
S1	53	F	G	G::99.87(8505)
S1	54	F	L	L::99.93(8491)
S1	55	F	G	G::99.98(8499)
S1	57	F	T	T::99.79(8472)
S1	58	F	P	P::99.93(8463)
S1	59	F	P	P::99.92(8420)
S1	60	F	H	H::99.94(8423)
S1	61	F	G	G::99.85(8396)
S1	62	F	G	G::99.88(8413)

S1	63	F	L	L::99.92(8349)
S1	64	F	L	L::99.88(8315)
S1	65	F	G	G::99.90(8302)
S1	66	F	W	W::99.89(8217)
S1	67	F	T	T::82.74(4596) S::17.19(955)
S1	68	F	P	P::99.91(4685)
S1	69	F	Q	Q::99.91(4685)
S1	70	F	A	A::100.00(4689)
S1	71	F	Q	Q::99.91(4686)
S1	72	F	G	G::99.89(4685)
S1	73	F	I	I::99.79(4677)
S1	74	F	L	L::99.96(4685)
S1	75	F	Q	Q::99.83(4679)
S1	76	F	T	T::99.96(4685)
S1	77	F	L	L::99.94(4682)
S1	78	F	P	P::99.96(4685)
S1	79	F	A	A::99.83(4681)
S1	80	F	N	N::99.70(4674)
S1	81	F	P	P::99.89(4681)
S1	82	F	P	P::99.98(4685)
S1	83	F	P	P::100.00(4686)
S1	84	F	A	A::99.68(4669)
S1	85	F	S	S::100.00(4684)
S1	86	F	T	T::99.98(4681)
S1	87	F	K	K::98.90(4597)
S1	88	F	R	R::99.87(4642)
S1	89	F	Q	Q::99.96(4646)
S1	90	F	S	S::99.94(4645)
S1	91	F	G	G::99.94(4645)
S1	92	F	R	R::99.94(4643)
S1	93	F	Q	Q::99.80(4605)
S1	94	F	P	P::99.87(2344)
S1	95	F	T	T::99.91(2345)
S1	96	F	P	P::100.00(44)
S1	97	F	L	L::97.73(43)
S1	98	F	S	S::97.67(42)
S1	99	F	P	P::100.00(43)
S1	100	F	P	P::100.00(43)
S1	101	F	L	L::100.00(43)
S1	102	F	R	R::100.00(42)
S1	103	F	N	N::100.00(42)
S1	104	F	T	T::100.00(42)
S1	105	F	H	H::100.00(42)
S1	106	F	P	P::100.00(42)
S1	107	F	Q	Q::100.00(42)
S1	108	F	A	A::100.00(42)
S1	109	F	M	M::100.00(42)
S1	110	F	Q	Q::100.00(41)

Meta data	
Assembly file:	HBV-RYD-51.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-51
Date/Time	Mon 25 Mar 13:20:51 GMT 2019