

HBV-RYD-8

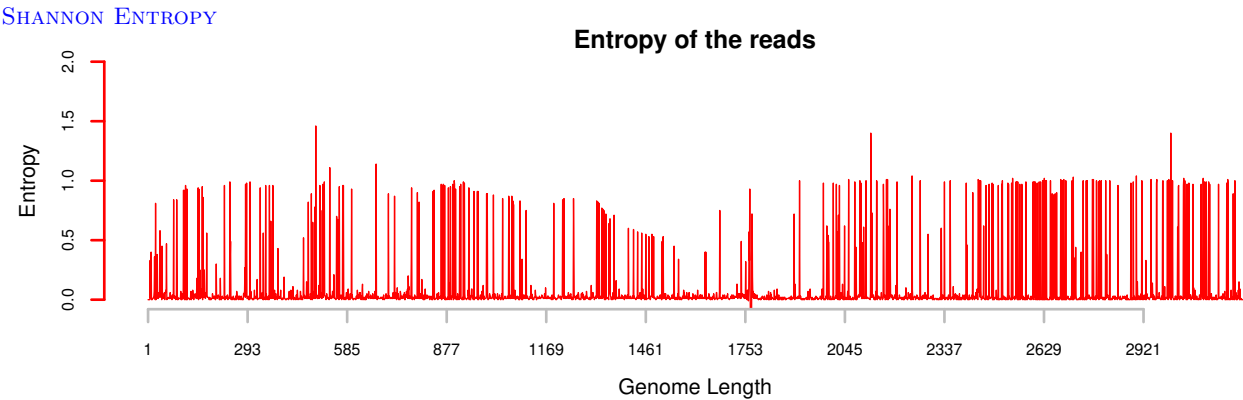
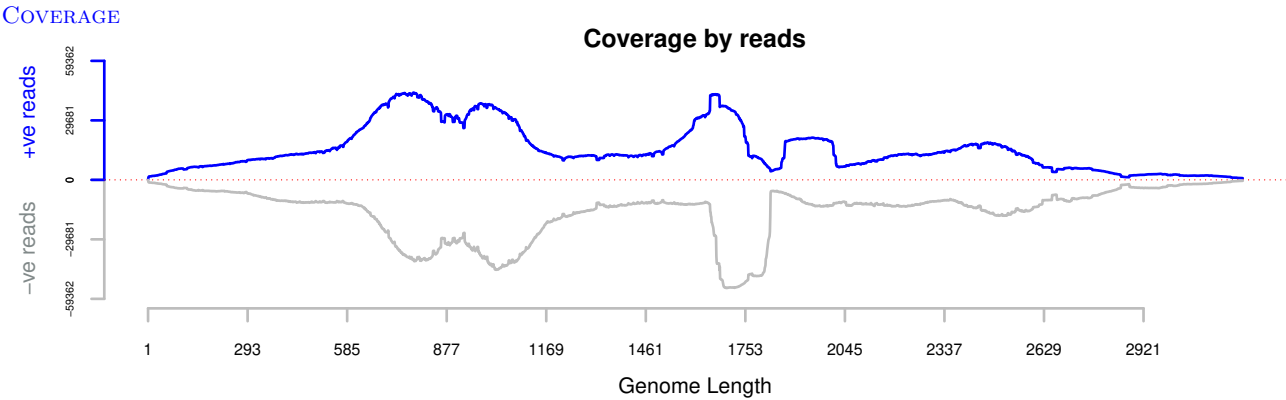
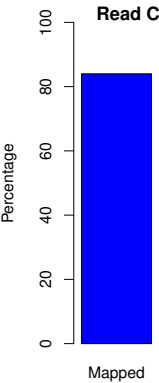
File name	HBV-RYD-8.sam
Ref name	KX186584.1 Hepatitis B virus isolate Eafr, complete genome
Ref len	3212
Program used	Tanoti Assembler 1.0

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Total reads	822378
Mapped reads	688782 (83.75%)
Unmapped reads	133596
Mapped loan pairs	6356
Average read length	148nt

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Coverage	3212nt (100.00%)
Average depth	30910 reads/site
Average insert length	177nt



# CONSENSUS SEQUENCE

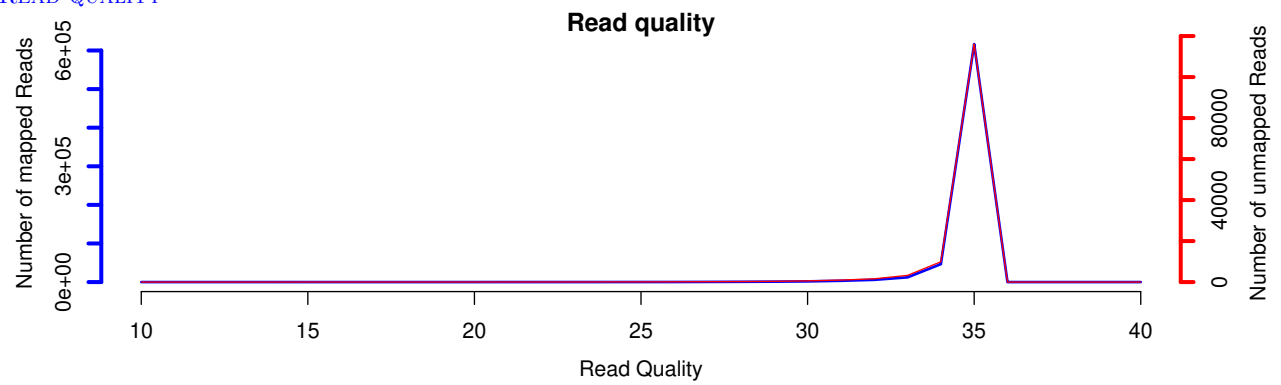
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140    ACCCTGCGCT GAACATGGAG AACATCACAT CAGGATTCCCT AGGACCCCTG CTCGTGTTAC AGGCGGGGTT
210    TTTCTTGTG ACAAGAATCC TCACAATACC GCAGAGTCTA GACTCGTGGT GGACTTCTCT CAATTTTCTA
280    GGGGGAAC TA CCGTGTGTCT TGGCCAAAAT TCGCAGTCCC CAACCTCCAA TCACTCACCA ACCTCCTGTC
350    CTCCAAC TTG TCCTGGTTAT CGCTGGATGT GTCTGCGGCG TTTTATCATC TTCCTCTTCA TCCTGCTGCT
420    ATGCTCATC TTCTTGTG TTTCTCTGGA CTATCAAGGT ATGTTGCCCC TTTGTCCTCT AATTCCAGGA
490    TCTTCAACCA CCAGCACGGG ACCATGCAGA ACCTGCACGA CTCCTGCTCA AGGAACCTCT ATGTATCCCT
560    CCTGTTGCTG TACCAAACCT TCGGACGGAA ATTGCACCTG TATTCCTATC CCATCATCAT GGGCTTTCGG
630    AAAATTCCTA TGGGAGTGGG CCTCAGCCCG TTTCTCCTGG CTCAGTTTAC TAGTGCCATT TGTTCACTGG
700    TTCGTAGGGC TTTCCCCCAC TGTTTGGCTT TCAGTTATAT GGATGATGTG GTATTGGGGG CCAAGTCTGT
770    ACAGCATCTT GAGTCCCTTT TTACCGCTGT TACCAATTTT CTTTTGTCTT TGGGTATACA TTTAAACCTT
840    AACAAAACAA AAAGATGGGG TTAATCTTTA CATTTTCATG GCTATGTCAT TGGATGTTAT GGGTCATTGC
910    CACAAGAGCA CATCACACAG AAAATCAAAG AATGTTTTAG AAAACTTCCT GTTAACAGAC CTATTGATTG
980    GAAAGTCTGT CAACGTATTG TGGGTCTTTT GGGTTTTGCT GCCCCTTTTA CACAATGTGG TTATCCTGCT
1050   TTAATGCCCT TGTATGCATG CATTCAATCT AAGCAGGCTT TACTTTCTC GCCAATTTAT AAGGCCTTTC
1120   TGTGTAAACA ATACCTGAAC CTTTACCCCG TTGCCCGGCA ACGGCCAGGT CTGTGCCAAG TGTTTGTCTG
1190   CGCAACCCCG ACTGGCTGGG GCTTGGTTAT GGGCCATCAG CGCATGCGTG GAACCTTTTT GGTCTCCTCTG
1260   CCGATCCATA CTGCGGAACCT CCTAGCCGCT TGTTTTGTCT GCAGCAGGTC TGGAGCAAAC ATTCTCGGGA
1330   CGGACAATCT TGTGTCTCTC TCCCGCAAAT ATACATCGTT TCCATGGCTG CTAGGCTGTG CTGCCAATCTG
1400   GATCCTGCGC GGGACGCTCT TTGTTACGT CCCGTGCGCG CTGAATCCCG CGGACGACCC TTCTCGGGGC
1470   CGCTTGGGAC TCTCTCGTCC CTTTCTCCGT CTGCCGTTTC GACCGACCAC GGGGCGCACC TCTCTTACG
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1610   GAGACCACCG TGAACGCCCA CCAATCTTTG CCCAAGGTCT TACATAAGAG GACTCTTGA CTCTCTGTAA
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1890   GCTTTGGGGC ATGGACATTG ACCCTTATAA AGAATTTGGA GCTACTGTGG AGTTACTCTC GTTTTTGCCT
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2240   CGGTCATAGA GTATTTGGTG TCTTTCGGAG TGTGGATTCT CACTCCTCCA GCTTATAGAC CACCAAATGC
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2520   CTCATTGGAA AACACCCTCT TTTCTTAACA TACATTTACA CCAAGACATT ATTAACAAAT GTGAACAATT
2590   TGTAGGCCCA CTCACAGTCA ATGAGAAAAG AAGATTAAC TTAGTCATGC CTGCTAGATT TTTCCCATC
2660   TCTACGAAAT ATTTGCCCTT AGAGAAAGGT ATTAACCTT ATTATCCAGA ACATCTAGTT AATCATTACT
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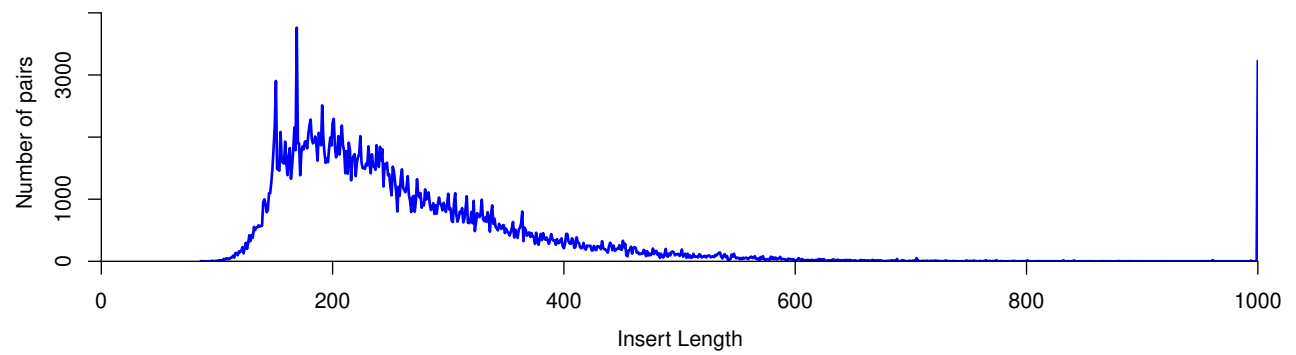
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Genome Composition	
A	733 (22.82%)
T	916 (28.52%)
G	699 (21.76%)
C	864 (26.90%)
N	0 (0.00%)
Total Nucleotides	3212
GC%	48.66

### READ QUALITY



### INSERT LENGTH DISTRIBUTION



AMINO ACID VARIATIONS

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::100.00(3006)
P2	2	F	N	N::93.84(2909) D::5.81(180)
P2	3	F	F	F::92.68(2887) I::6.77(211)
P2	4	F	P	P::99.91(3410)
P2	5	F	P	P::99.74(3459)
P2	6	F	N	N::92.30(3212) S::6.41(223)
P2	7	F	S	S::75.44(2768) F::24.39(895)
P2	8	F	A	A::99.48(3848)
P2	9	F	R	R::92.26(3565) G::7.09(274)
P2	10	F	S	S::99.52(4171)
P2	11	F	Q	Q::87.39(3832) H::12.11(531)
P2	12	F	S	S::99.56(4537)
P2	13	F	E	E::92.70(4241) K::7.28(333)
P2	14	F	R	R::99.28(4985)
P2	15	F	P	P::99.56(5180)
P2	16	F	V	V::99.32(5284)
P2	18	F	P	P::90.17(5090) S::9.81(554)
P2	19	F	C	C::99.80(7152)
P2	20	F	W	W::99.73(7459)
P2	21	F	W	W::99.12(7697)
P2	22	F	L	L::99.79(8018)
P2	23	F	Q	Q::99.71(8190)
P2	25	F	R	R::99.66(8397)
P2	26	F	N	N::99.60(8888)
P2	27	F	S	S::99.84(9077)
P2	28	F	K	K::73.19(6681) E::19.56(1785) A::7.18(655)
P2	29	F	P	P::99.78(9492)
P2	30	F	C	C::99.88(9647)
P2	31	F	S	S::99.86(9652)
P2	32	F	D	D::99.22(9758)
P2	33	F	Y	Y::99.77(9835)
P2	34	F	C	C::99.71(9056)
P2	35	F	L	L::99.66(9141)
P2	36	F	S	S::66.44(6176) T::33.51(3115)
P2	37	F	H	H::99.87(9343)
P2	38	F	I	I::65.47(6162) L::34.52(3249)
P2	39	F	V	V::99.81(10591)
P2	40	F	N	N::99.90(10877)
P2	41	F	L	L::99.96(10987)
P2	42	F	L	L::99.11(10975)
P2	43	F	E	E::99.20(11280)
P2	44	F	D	D::99.43(11493)
P2	45	F	W	W::99.47(11505)
P2	46	F	G	G::99.22(11523)
P2	47	F	P	P::99.91(11717)
P2	48	F	C	C::99.73(11533)

P2	49	F	A	A::66.06(7428) T::33.75(3795)
P2	50	F	E	E::98.93(11759)
P2	51	F	H	H::99.64(12005)
P2	52	F	G	G::98.94(11683)
P2	53	F	E	E::64.73(7451) K::34.91(4019)
P2	54	F	H	H::99.80(12011)
P2	55	F	H	H::96.56(11804)
P2	56	F	I	I::99.89(12194)
P2	57	F	R	R::87.22(10599) K::12.48(1517)
P2	58	F	I	I::99.89(12282)
P2	59	F	P	P::99.82(12309)
P2	60	F	R	R::99.74(12467)
P2	61	F	T	T::99.97(12400)
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P2	63	F	A	A::99.46(12559)
P2	64	F	R	R::99.68(12704)
P2	65	F	V	V::99.62(12735)
P2	66	F	T	T::99.83(12736)
P2	67	F	G	G::99.65(12915)
P2	68	F	G	G::99.58(12847)
P2	69	F	V	V::99.71(12927)
P2	71	F	L	L::99.90(13040)
P2	72	F	V	V::99.81(13138)
P2	73	F	D	D::99.76(13141)
P2	74	F	K	K::99.87(13043)
P2	75	F	N	N::99.93(13491)
P2	76	F	P	P::99.91(13463)
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P2	79	F	T	T::99.71(13767)
P2	80	F	A	A::58.64(7998) S::34.44(4698) E::5.98(816)
P2	81	F	E	E::99.85(14237)
P2	82	F	S	S::99.94(14250)
P2	83	F	R	R::99.71(14309)
P2	84	F	L	L::99.93(14569)
P2	85	F	V	V::99.96(14685)
P2	86	F	V	V::99.86(14872)
P2	87	F	D	D::99.52(14947)
P2	89	F	S	S::99.63(14824)
P2	90	F	Q	Q::99.90(15254)
P2	92	F	S	S::99.93(15512)
P2	93	F	R	R::99.44(15572)
P2	94	F	G	G::98.94(15378)
P2	95	F	N	N::60.29(9049) S::39.31(5899)
P2	96	F	Y	Y::57.23(8628) S::39.70(5985)
P2	97	F	R	R::99.82(16335)
P2	98	F	V	V::99.68(16599)
P2	99	F	S	S::99.95(16581)
P2	100	F	W	W::98.73(16490)
P2	101	F	P	P::99.75(16929)
P2	102	F	K	K::99.93(17422)

P2	104	F	A	A::98.90(17310)
P2	105	F	V	V::99.83(17893)
P2	106	F	P	P::99.83(18030)
P2	107	F	N	N::99.91(18256)
P2	108	F	L	L::99.91(18426)
P2	109	F	Q	Q::99.83(18212)
P2	110	F	S	S::99.89(18737)
P2	111	F	L	L::99.75(18883)
P2	112	F	T	T::99.95(18814)
P2	113	F	N	N::99.92(19106)
P2	114	F	L	L::99.88(19308)
P2	115	F	L	L::99.86(18849)
P2	116	F	S	S::99.93(19562)
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P2	118	F	N	N::99.93(19627)
P2	119	F	L	L::99.89(19846)
P2	120	F	S	S::83.05(16719) T::16.88(3398)
P2	121	F	W	W::98.64(20117)
P2	122	F	L	L::99.94(20061)
P2	123	F	S	S::99.88(20512)
P2	124	F	L	L::99.92(20841)
P2	125	F	D	D::99.43(21387)
P2	126	F	V	V::99.78(21749)
P2	127	F	S	S::91.17(19781) T::8.73(1894)
P2	128	F	A	A::99.72(21814)
P2	129	F	A	A::99.49(22067)
P2	131	F	Y	Y::99.82(22126)
P2	132	F	H	H::99.83(22331)
P2	133	F	L	L::97.09(21617)
P2	134	F	P	P::99.91(22468)
P2	135	F	L	L::99.96(22498)
P2	136	F	H	H::99.85(22723)
P2	137	F	P	P::99.91(22793)
P2	138	F	A	A::99.18(22920)
P2	139	F	A	A::99.14(23134)
P2	140	F	M	M::99.65(23195)
P2	141	F	P	P::99.82(23350)
P2	142	F	H	H::99.92(23270)
P2	143	F	L	L::99.78(23292)
P2	144	F	L	L::99.93(23461)
P2	145	F	V	V::99.53(23787)
P2	146	F	G	G::98.87(23399)
P2	147	F	S	S::99.86(23607)
P2	148	F	S	S::99.93(23569)
P2	149	F	G	G::99.14(23551)
P2	150	F	L	L::99.89(23737)
P2	151	F	S	S::99.95(23700)
P2	152	F	R	R::99.32(23672)
P2	153	F	Y	Y::99.86(24023)
P2	154	F	V	V::99.74(24194)
P2	155	F	A	A::97.81(23603)

P2	156	F	R	R::99.48(23980)
P2	157	F	L	L::99.71(24307)
P2	158	F	S	S::99.92(24559)
P2	159	F	S	S::99.54(24027)
P2	160	F	N	N::97.62(23833)
P2	161	F	S	S::84.37(20487) A::15.19(3688)
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P2	163	F	I	I::76.87(18597) T::23.04(5575)
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P2	167	F	Q	Q::98.24(24433)
P2	168	F	H	H::62.82(15309) Y::36.82(8973)
P2	169	F	G	G::99.16(24873)
P2	170	F	T	T::78.83(19427) N::20.92(5155)
P2	171	F	M	M::62.23(14781) L::37.42(8889)
P2	172	F	Q	Q::61.51(14741) P::37.76(9050)
P2	173	F	N	N::99.47(25347)
P2	174	F	L	L::99.89(25484)
P2	175	F	H	H::99.75(25653)
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P2	177	F	S	S::99.78(25112)
P2	178	F	C	C::99.51(25583)
P2	179	F	S	S::99.90(25967)
P2	180	F	R	R::99.09(26360)
P2	181	F	N	N::99.60(26812)
P2	182	F	L	L::99.88(26857)
P2	183	F	Y	Y::99.86(26869)
P2	184	F	V	V::81.15(20663) E::18.36(4675)
P2	185	F	S	S::82.62(21778) T::17.31(4562)
P2	186	F	L	L::99.79(27190)
P2	187	F	L	L::64.17(17145) M::35.75(9552)
P2	188	F	L	L::99.91(27921)
P2	189	F	L	L::99.94(27885)
P2	190	F	Y	Y::63.03(16945) F::36.77(9884)
P2	191	F	Q	Q::62.77(16946) K::37.17(10036)
P2	192	F	T	T::99.95(29242)
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P2	195	F	R	R::99.14(30620)
P2	196	F	K	K::99.78(31462)
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P2	198	F	H	H::99.69(32374)
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P2	207	F	G	G::99.10(37251)



P2	209	F	R	R::99.03(37852)
P2	210	F	K	K::99.94(39028)
P2	211	F	I	I::99.92(40100)
P2	212	F	P	P::99.93(41102)
P2	213	F	M	M::99.56(41781)
P2	214	F	G	G::99.34(42959)
P2	215	F	V	V::99.81(44106)
P2	216	F	G	G::99.74(44893)
P2	217	F	L	L::99.85(45959)
P2	218	F	S	S::99.76(48567)
P2	219	F	P	P::99.89(49801)
P2	221	F	L	L::99.90(51406)
P2	222	F	L	L::99.62(52718)
P2	223	F	A	A::64.59(34192) T::30.25(16012)
P2	224	F	Q	Q::99.88(55082)
P2	226	F	T	T::99.88(57183)
P2	227	F	S	S::99.72(58302)
P2	228	F	A	A::99.78(59702)
P2	229	F	I	I::99.61(61112)
P2	230	F	C	C::99.52(60885)
P2	231	F	S	S::99.92(61739)
P2	232	F	V	V::99.90(63390)
P2	233	F	V	V::99.71(63550)
P2	234	F	R	R::99.63(61084)
P2	235	F	R	R::99.70(61966)
P2	236	F	A	A::99.62(68091)
P2	238	F	P	P::99.84(70378)
P2	239	F	H	H::99.89(71413)
P2	240	F	C	C::99.70(72007)
P2	241	F	L	L::99.90(71340)
P2	242	F	A	A::99.25(74737)
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P2	256	F	V	V::99.53(80773)
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P2	259	F	L	L::99.83(82128)
P2	260	F	E	E::99.57(82559)
P2	261	F	S	S::99.75(82157)
P2	262	F	L	L::99.77(82291)
P2	263	F	F	F::69.35(54984) Y::30.58(24244)

P2	264	F	T	T::99.83(80380)
P2	265	F	A	A::77.26(61214) S::21.98(17418)
P2	266	F	V	V::99.55(81533)
P2	267	F	T	T::99.63(79081)
P2	268	F	N	N::99.85(79167)
P2	270	F	L	L::99.67(78050)
P2	271	F	L	L::99.91(77940)
P2	272	F	S	S::99.90(78549)
P2	273	F	L	L::99.88(77056)
P2	274	F	G	G::99.63(76643)
P2	275	F	I	I::99.65(76031)
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P2	277	F	L	L::99.94(74699)
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P2	279	F	P	P::99.87(69237)
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P2	281	F	K	K::99.81(71896)
P2	282	F	T	T::99.91(71365)
P2	283	F	K	K::99.72(68215)
P2	284	F	R	R::99.71(67812)
P2	285	F	W	W::99.62(67403)
P2	286	F	G	G::99.60(57306)
P2	287	F	Y	Y::99.83(57633)
P2	288	F	S	S::99.85(57638)
P2	289	F	L	L::99.93(57433)
P2	290	F	H	H::62.01(35785) N::37.94(21897)
P2	292	F	M	M::99.76(64486)
P2	293	F	G	G::99.61(62445)
P2	294	F	Y	Y::99.91(64077)
P2	295	F	V	V::99.66(62573)
P2	296	F	I	I::99.90(62769)
P2	297	F	G	G::99.60(61242)
P2	298	F	C	C::60.96(35282) S::38.96(22552)
P2	299	F	Y	Y::62.91(36228) W::36.21(20856)
P2	300	F	G	G::99.78(61357)
P2	301	F	S	S::99.90(62861)
P2	302	F	L	L::99.88(60569)
P2	303	F	P	P::99.76(60978)
P2	304	F	Q	Q::99.89(57667)
P2	305	F	E	E::99.53(57316)
P2	306	F	H	H::99.91(57459)
P2	307	F	I	I::99.94(56947)
P2	308	F	T	T::60.30(31445) R::39.28(20485)
P2	309	F	Q	Q::60.56(31545) M::39.06(20348)
P2	310	F	K	K::99.77(60530)
P2	311	F	I	I::99.85(62423)
P2	312	F	K	K::99.79(64274)
P2	313	F	E	E::66.12(42312) D::32.65(20891)
P2	314	F	C	C::99.53(66208)
P2	316	F	R	R::98.73(67417)
P2	317	F	K	K::99.59(69434)

P2	318	F	L	L::99.92(67840)
P2	319	F	P	P::99.87(70634)
P2	320	F	V	V::99.81(71358)
P2	321	F	N	N::99.70(70274)
P2	322	F	R	R::99.82(68310)
P2	323	F	P	P::99.89(73081)
P2	324	F	I	I::99.72(74417)
P2	325	F	D	D::99.54(74772)
P2	326	F	W	W::98.82(74011)
P2	327	F	K	K::99.91(76065)
P2	328	F	V	V::99.93(74631)
P2	329	F	C	C::99.87(76390)
P2	330	F	Q	Q::99.76(75976)
P2	331	F	R	R::99.29(73625)
P2	332	F	I	I::99.80(77784)
P2	333	F	V	V::99.92(78903)
P2	334	F	G	G::99.48(78615)
P2	335	F	L	L::99.87(78588)
P2	336	F	L	L::99.85(79470)
P2	337	F	G	G::99.47(76820)
P2	339	F	A	A::99.21(79166)
P2	340	F	A	A::99.73(79678)
P2	341	F	P	P::99.89(79687)
P2	343	F	T	T::99.76(77912)
P2	344	F	Q	Q::99.82(77716)
P2	345	F	C	C::99.70(76951)
P2	346	F	G	G::99.36(74869)
P2	347	F	Y	Y::99.88(75859)
P2	348	F	P	P::99.89(76120)
P2	349	F	A	A::99.60(75312)
P2	350	F	L	L::99.92(74595)
P2	351	F	M	M::99.48(74066)
P2	352	F	P	P::99.83(70578)
P2	353	F	L	L::99.92(70387)
P2	354	F	Y	Y::99.81(72426)
P2	355	F	A	A::99.37(69022)
P2	356	F	C	C::99.65(69129)
P2	357	F	I	I::75.67(53289) T::24.23(17065)
P2	358	F	Q	Q::99.14(70220)
P2	359	F	S	S::99.91(69839)
P2	360	F	K	K::99.88(68691)
P2	361	F	Q	Q::99.65(66361)
P2	362	F	A	A::99.83(65567)
P2	364	F	T	T::99.77(61900)
P2	366	F	S	S::99.88(57969)
P2	367	F	P	P::99.83(57121)
P2	368	F	T	T::99.73(56593)
P2	369	F	Y	Y::99.91(52819)
P2	370	F	K	K::99.72(53518)
P2	371	F	A	A::99.69(53090)
P2	373	F	L	L::99.95(49889)

P2	374	F	C	C::98.28(47903)
P2	375	F	K	K::99.04(47161)
P2	376	F	Q	Q::99.81(46082)
P2	377	F	Y	Y::99.92(45018)
P2	378	F	L	L::99.71(44059)
P2	379	F	N	N::99.41(43306)
P2	380	F	L	L::99.88(42179)
P2	381	F	Y	Y::99.76(41151)
P2	382	F	P	P::99.87(40528)
P2	383	F	V	V::99.85(39965)
P2	384	F	A	A::99.71(38944)
P2	385	F	R	R::99.70(37889)
P2	386	F	Q	Q::99.76(37006)
P2	387	F	R	R::99.78(35913)
P2	388	F	P	P::99.74(35016)
P2	389	F	G	G::99.71(34413)
P2	390	F	L	L::99.91(33648)
P2	391	F	C	C::99.59(33318)
P2	392	F	Q	Q::99.84(33601)
P2	393	F	V	V::99.80(33464)
P2	395	F	A	A::99.54(32467)
P2	396	F	D	D::99.71(30871)
P2	397	F	A	A::99.70(31430)
P2	398	F	T	T::99.88(31593)
P2	399	F	P	P::99.92(31118)
P2	400	F	T	T::99.86(30713)
P2	401	F	G	G::99.37(30389)
P2	402	F	W	W::99.67(30049)
P2	403	F	G	G::99.64(29923)
P2	404	F	L	L::99.88(29374)
P2	405	F	V	V::73.37(19616) A::26.33(7039)
P2	406	F	M	M::73.22(19500) I::26.43(7038)
P2	407	F	G	G::99.55(28324)
P2	408	F	H	H::99.73(28805)
P2	409	F	Q	Q::99.64(29111)
P2	410	F	R	R::99.54(28878)
P2	411	F	M	M::99.00(28819)
P2	412	F	R	R::99.73(28687)
P2	413	F	G	G::99.28(28385)
P2	414	F	T	T::99.78(28540)
P2	416	F	L	L::65.41(17539) V::24.52(6576) S::9.87(2647)
P2	417	F	A	A::99.49(27635)
P2	418	F	P	P::99.92(27757)
P2	419	F	L	L::99.85(27222)
P2	420	F	P	P::99.72(27585)
P2	421	F	I	I::99.57(27726)
P2	422	F	H	H::99.90(27559)
P2	423	F	T	T::99.89(27650)
P2	424	F	A	A::99.64(27464)
P2	425	F	E	E::99.01(27157)
P2	426	F	L	L::99.93(27323)

P2	427	F	L	L::99.92(27128)
P2	428	F	A	A::99.85(27101)
P2	429	F	A	A::99.49(27074)
P2	430	F	C	C::99.82(26985)
P2	432	F	A	A::99.76(26988)
P2	433	F	R	R::98.24(26397)
P2	434	F	S	S::99.75(26852)
P2	435	F	R	R::99.42(26775)
P2	436	F	S	S::99.82(26507)
P2	437	F	G	G::99.79(25947)
P2	438	F	A	A::99.85(21356)
P2	439	F	N	N::74.82(15933) K::24.53(5224)
P2	440	F	I	I::75.37(16006) L::24.37(5175)
P2	441	F	L	L::75.31(16001) I::24.63(5232)
P2	442	F	G	G::99.74(23263)
P2	443	F	T	T::99.85(23218)
P2	444	F	D	D::99.67(23174)
P2	445	F	N	N::99.54(23102)
P2	446	F	S	S::99.94(24877)
P2	447	F	V	V::99.88(24875)
P2	448	F	V	V::99.88(25820)
P2	449	F	L	L::99.85(25771)
P2	450	F	S	S::99.84(25157)
P2	451	F	R	R::99.41(24436)
P2	452	F	K	K::99.36(25314)
P2	453	F	Y	Y::99.80(25479)
P2	454	F	T	T::99.84(25514)
P2	455	F	S	S::99.85(24774)
P2	457	F	P	P::99.88(25535)
P2	458	F	W	W::99.70(25346)
P2	459	F	L	L::99.93(25111)
P2	460	F	L	L::99.91(24594)
P2	461	F	G	G::99.68(24581)
P2	462	F	C	C::99.81(24192)
P2	463	F	A	A::99.40(24403)
P2	464	F	A	A::99.68(24585)
P2	465	F	N	N::99.74(24602)
P2	466	F	W	W::99.41(24271)
P2	467	F	I	I::99.74(24509)
P2	468	F	L	L::99.93(24316)
P2	469	F	R	R::99.81(22790)
P2	470	F	G	G::99.79(23519)
P2	471	F	T	T::99.83(23694)
P2	472	F	S	S::99.91(23793)
P2	474	F	V	V::99.67(22743)
P2	475	F	Y	Y::99.68(23327)
P2	476	F	V	V::99.88(23576)
P2	477	F	P	P::99.90(23557)
P2	478	F	S	S::99.76(22369)
P2	479	F	A	A::99.70(23289)
P2	480	F	L	L::99.87(23560)

P2	481	F	N	N::98.86(23555)
P2	482	F	P	P::99.88(22802)
P2	483	F	A	A::99.69(23304)
P2	484	F	D	D::99.76(23668)
P2	485	F	D	D::99.39(23833)
P2	486	F	P	P::99.93(23418)
P2	487	F	S	S::99.87(23922)
P2	488	F	R	R::99.90(24122)
P2	489	F	G	G::99.80(23557)
P2	490	F	R	R::99.71(24428)
P2	491	F	L	L::99.91(24456)
P2	492	F	G	G::99.55(22099)
P2	493	F	L	L::88.47(19599) I::10.62(2352)
P2	494	F	S	S::88.35(19521) Y::11.37(2512)
P2	495	F	R	R::99.76(24753)
P2	496	F	P	P::99.91(25410)
P2	497	F	L	L::99.86(25458)
P2	498	F	L	L::99.68(25242)
P2	499	F	R	R::99.57(25422)
P2	500	F	L	L::99.90(25538)
P2	501	F	P	P::99.77(24980)
P2	503	F	R	R::89.51(20373) Q::10.42(2372)
P2	504	F	P	P::99.81(25487)
P2	505	F	T	T::99.82(26184)
P2	506	F	T	T::99.52(26712)
P2	507	F	G	G::99.89(27154)
P2	508	F	R	R::99.43(27063)
P2	509	F	T	T::99.68(27863)
P2	510	F	S	S::99.87(27896)
P2	511	F	L	L::99.88(28063)
P2	512	F	Y	Y::99.46(28340)
P2	513	F	A	A::99.66(28586)
P2	514	F	D	D::90.56(25293) V::8.83(2467)
P2	515	F	S	S::99.87(29048)
P2	516	F	P	P::99.78(29751)
P2	517	F	S	S::99.90(30350)
P2	518	F	V	V::99.31(30648)
P2	519	F	P	P::99.76(31304)
P2	520	F	S	S::99.79(31551)
P2	521	F	H	H::99.87(32188)
P2	522	F	L	L::99.89(32276)
P2	523	F	P	P::99.75(32731)
P2	524	F	D	D::98.81(33159)
P2	525	F	R	R::99.63(33907)
P2	526	F	V	V::99.79(34758)
P2	527	F	H	H::99.68(34981)
P2	529	F	A	A::99.32(35606)
P2	530	F	S	S::99.88(35899)
P2	531	F	P	P::99.87(36813)
P2	532	F	L	L::99.87(37270)
P2	533	F	H	H::99.76(38680)

P2	534	F	V	V::99.90(41460)
P2	535	F	A	A::99.55(41579)
P2	536	F	W	W::99.46(42077)
P2	537	F	R	R::98.80(41826)
P2	538	F	P	P::99.86(42250)
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S2	1	F	S	S::100.00(2180)
S2	2	F	T	T::100.00(3035)
S2	3	F	T	T::99.74(3105)
S2	5	F	H	H::99.74(3407)
S2	6	F	Q	Q::98.76(3437)
S2	7	F	T	T::92.76(3228) A::6.41(223)
S2	8	F	L	L::99.86(3694)
S2	9	F	Q	Q::99.74(3859)
S2	10	F	D	D::99.44(4118)
S2	11	F	P	P::99.34(4224)
S2	12	F	R	R::87.34(3905) T::11.85(530)
S2	13	F	V	V::99.63(4542)
S2	14	F	R	R::90.72(4361) K::9.22(443)
S2	15	F	G	G::99.47(5094)
S2	16	F	L	L::99.73(5198)
S2	17	F	Y	Y::99.63(5353)
S2	19	F	P	P::99.89(7057)
S2	20	F	A	A::99.69(7335)
S2	21	F	G	G::99.80(7616)
S2	22	F	G	G::99.24(7854)
S2	23	F	S	S::99.64(8033)
S2	24	F	S	S::99.59(8229)
S2	25	F	S	S::99.68(8336)
S2	26	F	G	G::99.59(8701)
S2	27	F	T	T::99.59(8971)
S2	28	F	V	V::99.78(9077)
S2	29	F	N	N::92.95(8721) H::7.00(657)
S2	30	F	P	P::99.94(9601)
S2	31	F	V	V::99.91(9680)
S2	32	F	P	P::99.81(9699)
S2	33	F	T	T::99.86(9869)
S2	34	F	T	T::99.24(9787)
S2	35	F	V	V::67.59(6166) A::32.20(2937)
S2	36	F	S	S::99.92(9173)
S2	37	F	H	H::66.19(6172) L::33.34(3109)
S2	38	F	I	I::99.97(9396)
S2	39	F	S	S::99.83(10301)
S2	40	F	S	S::99.87(10664)
S2	41	F	I	I::99.94(10893)
S2	43	F	S	S::99.60(11005)
S2	44	F	R	R::99.06(11302)
S2	45	F	I	I::99.91(11577)
S2	46	F	G	G::99.54(11559)
S2	47	F	D	D::99.62(11655)
S2	48	F	P	P::97.46(11417)
S2	49	F	A	A::99.62(11179)

S2	50	F	L	L::66.35(7469) P::33.61(3783)
S2	51	F	N	N::95.81(11441)
S2	52	F	M	M::98.60(11834)
S2	53	F	E	E::99.24(11376)
S2	54	F	N	N::74.15(8553) S::25.52(2944)
S2	55	F	I	I::99.86(12089)
S2	56	F	T	T::99.44(12157)
S2	57	F	S	S::99.79(12081)
S2	58	F	G	G::87.27(10618) R::12.37(1505)
S2	60	F	L	L::99.93(12277)
S2	61	F	G	G::99.70(12361)
S2	62	F	P	P::99.94(12354)
S2	63	F	L	L::99.90(12452)
S2	64	F	L	L::99.81(12638)
S2	65	F	V	V::99.52(12717)
S2	66	F	L	L::99.94(12639)
S2	67	F	Q	Q::94.79(12186)
S2	68	F	A	A::99.64(12862)
S2	69	F	G	G::99.45(12907)
S2	72	F	L	L::99.93(12994)
S2	73	F	L	L::99.66(13082)
S2	74	F	T	T::99.83(13130)
S2	75	F	R	R::62.75(8198) K::37.16(4855)
S2	76	F	I	I::99.87(13515)
S2	77	F	L	L::99.64(13405)
S2	78	F	T	T::99.62(13475)
S2	79	F	I	I::99.75(13782)
S2	80	F	P	P::99.69(13563)
S2	81	F	Q	Q::83.21(11599) P::10.62(1481) K::5.96(831)
S2	82	F	S	S::99.76(14247)
S2	83	F	L	L::99.87(14105)
S2	84	F	D	D::99.69(14401)
S2	85	F	S	S::99.89(14474)
S2	86	F	W	W::99.65(14713)
S2	87	F	W	W::99.12(14691)
S2	88	F	T	T::99.83(15034)
S2	89	F	S	S::99.71(14923)
S2	90	F	L	L::99.65(14956)
S2	91	F	N	N::99.86(15343)
S2	93	F	L	L::99.95(15351)
S2	94	F	G	G::99.15(15533)
S2	95	F	G	G::95.02(14722)
S2	96	F	T	T::60.25(9063) A::39.50(5941)
S2	97	F	T	T::59.77(9072) P::40.09(6086)
S2	98	F	V	V::99.87(16488)
S2	99	F	C	C::99.84(16593)
S2	100	F	L	L::76.94(12802) R::15.13(2518) P::7.91(1316)
S2	101	F	G	G::98.80(16765)
S2	102	F	Q	Q::99.87(17063)
S2	103	F	N	N::99.94(17584)
S2	104	F	S	S::99.81(17409)



S2	105	F	Q	Q::99.75(17596)
S2	106	F	S	S::99.75(17832)
S2	107	F	P	P::97.37(17524)
S2	108	F	T	T::99.89(18283)
S2	109	F	S	S::99.85(18402)
S2	110	F	N	N::65.05(11917) S::34.79(6374)
S2	111	F	H	H::99.79(18985)
S2	112	F	S	S::99.29(18541)
S2	113	F	P	P::86.97(16322) L::12.88(2418)
S2	114	F	T	T::99.78(19197)
S2	115	F	S	S::99.93(18924)
S2	116	F	C	C::99.31(19084)
S2	117	F	P	P::99.93(19769)
S2	118	F	P	P::99.68(19831)
S2	119	F	T	T::61.80(12158) I::38.16(7508)
S2	120	F	C	C::82.87(16574) *:16.97(3394)
S2	121	F	P	P::99.75(20380)
S2	122	F	G	G::98.69(19829)
S2	123	F	Y	Y::99.74(20479)
S2	124	F	R	R::98.91(20332)
S2	125	F	W	W::99.01(20801)
S2	126	F	M	M::99.72(21449)
S2	127	F	C	C::91.05(19769) *:8.73(1895)
S2	128	F	L	L::99.68(21781)
S2	129	F	R	R::99.72(21899)
S2	130	F	R	R::98.70(21795)
S2	132	F	I	I::99.85(22165)
S2	133	F	I	I::99.82(22271)
S2	135	F	L	L::99.94(22591)
S2	137	F	I	I::99.92(22739)
S2	138	F	L	L::99.82(22740)
S2	139	F	L	L::99.88(23035)
S2	140	F	L	L::99.11(22905)
S2	141	F	C	C::99.66(23132)
S2	142	F	L	L::98.63(23054)
S2	143	F	I	I::99.81(23284)
S2	145	F	L	L::99.77(23449)
S2	146	F	L	L::99.92(23692)
S2	147	F	V	V::99.71(23644)
S2	148	F	L	L::99.90(23598)
S2	149	F	L	L::99.89(23441)
S2	150	F	D	D::99.61(23748)
S2	151	F	Y	Y::99.82(23827)
S2	152	F	Q	Q::88.45(20906) H::11.41(2696)
S2	153	F	G	G::99.26(23770)
S2	154	F	M	M::99.54(23888)
S2	155	F	L	L::99.87(24072)
S2	156	F	P	P::99.85(24185)
S2	157	F	V	V::74.65(18057) A::24.80(6000)
S2	158	F	C	C::99.69(24429)
S2	159	F	P	P::99.53(24374)

S2	160	F	L	L::80.95(19542) P::9.19(2218) Q::8.00(1931)
S2	161	F	I	I::84.53(20672) M::15.00(3668)
S2	162	F	P	P::99.60(24305)
S2	163	F	G	G::98.74(23970)
S2	164	F	S	S::76.40(18149) P::23.46(5573)
S2	165	F	S	S::99.71(24417)
S2	166	F	T	T::99.85(24955)
S2	167	F	T	T::99.51(24788)
S2	168	F	S	S::99.67(24355)
S2	169	F	T	T::99.56(24841)
S2	170	F	G	G::99.17(24873)
S2	171	F	P	P::77.83(18649) T::21.53(5159)
S2	172	F	C	C::99.41(23781)
S2	173	F	R	R::99.15(23704)
S2	174	F	T	T::99.67(25408)
S2	175	F	C	C::99.43(25222)
S2	176	F	T	T::99.90(25478)
S2	177	F	T	T::99.91(25730)
S2	178	F	P	P::63.12(15861) L::33.95(8532)
S2	179	F	A	A::99.37(25875)
S2	180	F	Q	Q::99.73(26084)
S2	181	F	G	G::98.71(26218)
S2	182	F	T	T::96.52(25849)
S2	183	F	S	S::99.86(26883)
S2	184	F	M	M::99.62(26809)
S2	185	F	Y	Y::64.87(16507) K::17.89(4552) F::16.38(4168)
S2	186	F	P	P::82.71(21932) H::17.16(4550)
S2	187	F	S	S::99.81(26590)
S2	188	F	C	C::99.71(27581)
S2	189	F	C	C::99.48(27901)
S2	190	F	C	C::99.60(27698)
S2	191	F	T	T::63.07(16920) S::36.54(9802)
S2	192	F	K	K::99.93(28747)
S2	193	F	P	P::99.77(29458)
S2	194	F	S	S::99.65(29636)
S2	195	F	D	D::99.56(30257)
S2	196	F	G	G::98.54(30692)
S2	197	F	N	N::99.78(31961)
S2	198	F	C	C::99.34(31829)
S2	199	F	T	T::99.55(31797)
S2	200	F	C	C::99.36(32355)
S2	201	F	I	I::99.95(33471)
S2	202	F	P	P::99.86(33985)
S2	203	F	I	I::99.86(34712)
S2	204	F	P	P::99.72(35195)
S2	205	F	S	S::98.92(35525)
S2	206	F	S	S::99.55(36216)
S2	207	F	W	W::99.13(36546)
S2	208	F	A	A::99.03(37398)
S2	210	F	G	G::98.02(37627)
S2	211	F	K	K::99.89(39154)

S2	213	F	L	L::99.75(41262)
S2	214	F	W	W::99.17(41840)
S2	215	F	E	E::99.60(43581)
S2	216	F	W	W::99.07(43934)
S2	217	F	A	A::99.72(45130)
S2	218	F	S	S::99.54(46413)
S2	219	F	A	A::99.67(49164)
S2	220	F	R	R::99.41(49943)
S2	222	F	S	S::99.13(50925)
S2	223	F	W	W::63.64(33426) *:31.36(16470)
S2	224	F	L	L::99.57(53525)
S2	225	F	S	S::99.55(55323)
S2	226	F	L	L::99.88(55622)
S2	227	F	L	L::99.92(57226)
S2	228	F	V	V::99.77(58957)
S2	229	F	P	P::99.78(59882)
S2	231	F	V	V::99.54(61455)
S2	232	F	Q	Q::99.81(62553)
S2	233	F	W	W::99.21(63171)
S2	235	F	V	V::99.63(61085)
S2	236	F	G	G::99.59(67235)
S2	237	F	L	L::99.85(68658)
S2	238	F	S	S::99.78(69267)
S2	239	F	P	P::99.91(70825)
S2	240	F	T	T::99.19(71548)
S2	241	F	V	V::99.73(71139)
S2	242	F	W	W::98.81(72775)
S2	243	F	L	L::99.89(74974)
S2	244	F	S	S::98.89(74396)
S2	245	F	V	V::99.12(76053)
S2	246	F	I	I::99.91(76564)
S2	247	F	W	W::99.03(76229)
S2	248	F	M	M::99.59(77879)
S2	249	F	M	M::99.71(78976)
S2	250	F	W	W::99.24(78903)
S2	251	F	Y	Y::99.36(79457)
S2	252	F	W	W::99.52(79363)
S2	253	F	G	G::98.99(78865)
S2	254	F	P	P::98.80(78304)
S2	255	F	S	S::94.67(76263)
S2	256	F	L	L::99.92(80669)
S2	257	F	Y	Y::99.68(80959)
S2	258	F	S	S::63.90(51390) N::30.03(24153) R::5.35(4303)
S2	259	F	I	I::99.84(82372)
S2	260	F	L	L::99.77(81937)
S2	261	F	S	S::99.46(82402)
S2	262	F	P	P::99.73(82266)
S2	264	F	L	L::69.17(54846) I::30.33(24046)
S2	265	F	P	P::97.51(77329)
S2	266	F	L	L::99.92(80958)
S2	267	F	L	L::99.14(80145)

S2	268	F	P	P::97.39(76400)
S2	269	F	I	I::99.88(79285)
S2	272	F	C	C::99.84(78066)
S2	273	F	L	L::99.60(78192)
S2	274	F	W	W::99.58(77130)
S2	275	F	V	V::99.65(76538)
S2	276	F	Y	Y::99.85(76096)
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X	1	F	M	M::97.74(24995)
X	2	F	A	A::99.79(25213)
X	3	F	A	A::99.67(25072)
X	4	F	R	R::99.16(24477)
X	5	F	L	L::99.87(24412)
X	6	F	C	C::99.43(24222)
X	7	F	C	C::99.62(24343)
X	8	F	Q	Q::99.64(24434)
X	9	F	L	L::99.95(24463)
X	10	F	D	D::99.46(24533)
X	11	F	P	P::99.89(24481)
X	12	F	A	A::99.50(23721)
X	13	F	R	R::99.87(22768)
X	14	F	D	D::99.80(23832)
X	15	F	V	V::99.63(23807)
X	16	F	L	L::99.86(23843)
X	17	F	C	C::99.50(23351)
X	18	F	L	L::99.68(22718)
X	19	F	R	R::99.86(23526)
X	20	F	P	P::99.90(23533)
X	21	F	V	V::99.67(23260)
X	22	F	G	G::86.47(19398) S::13.31(2985)
X	23	F	A	A::99.59(23557)
X	24	F	E	E::98.40(23435)
X	25	F	S	S::99.86(23511)
X	26	F	R	R::87.17(19869) C::12.58(2867)
X	27	F	G	G::98.86(23276)
X	28	F	R	R::99.59(23537)
X	29	F	P	P::99.97(23936)
X	30	F	F	F::87.86(20571) V::11.89(2783)
X	31	F	S	S::99.91(23802)
X	32	F	G	G::99.82(24123)
X	33	F	P	P::88.51(20831) S::11.39(2681)
X	34	F	L	L::99.76(24596)
X	35	F	G	G::99.55(23937)
X	36	F	T	T::87.74(19439) D::11.24(2490)
X	37	F	L	L::98.91(21854)
X	38	F	S	S::99.86(24178)
X	39	F	S	S::99.82(25147)
X	40	F	P	P::99.91(25494)
X	41	F	S	S::99.67(25241)
X	42	F	P	P::99.65(25396)
X	43	F	S	S::99.84(25655)
X	44	F	A	A::99.42(25069)

X	45	F	V	V::99.60(24700)
X	46	F	S	S::89.79(20427) P::10.03(2282)
X	47	F	T	T::89.05(20281) A::10.34(2355)
X	48	F	D	D::99.29(25868)
X	49	F	H	H::99.44(26520)
X	50	F	G	G::99.82(27048)
X	51	F	A	A::99.77(27078)
X	52	F	H	H::99.80(27589)
X	53	F	L	L::99.84(27964)
X	54	F	S	S::99.86(28036)
X	55	F	L	L::99.47(28056)
X	56	F	R	R::99.70(28521)
X	57	F	G	G::99.08(27668)
X	58	F	L	L::99.80(28746)
X	59	F	P	P::99.74(29737)
X	60	F	V	V::99.84(30266)
X	61	F	C	C::99.05(30160)
X	62	F	A	A::93.76(29139) T::5.80(1802)
X	64	F	S	S::99.85(31629)
X	65	F	S	S::99.93(32326)
X	66	F	A	A::99.50(32681)
X	67	F	G	G::98.71(32773)
X	68	F	P	P::99.84(33759)
X	69	F	C	C::99.74(34380)
X	70	F	A	A::99.16(34484)
X	71	F	L	L::99.90(35354)
X	72	F	R	R::99.33(35316)
X	74	F	T	T::99.76(36619)
X	75	F	S	S::99.90(36879)
X	76	F	A	A::99.31(37301)
X	77	F	R	R::99.81(40204)
X	78	F	R	R::99.49(41530)
X	79	F	M	M::99.64(42080)
X	80	F	E	E::99.60(42084)
X	81	F	T	T::99.82(42512)
X	82	F	T	T::99.79(42406)
X	83	F	V	V::99.54(42511)
X	84	F	N	N::99.86(42699)
X	85	F	A	A::99.52(42967)
X	86	F	H	H::99.74(43208)
X	87	F	Q	Q::99.72(42916)
X	88	F	F	F::91.73(38672) I::7.77(3275)
X	89	F	L	L::99.92(43360)
X	90	F	P	P::99.72(43523)
X	91	F	K	K::99.86(44140)
X	92	F	V	V::99.92(44937)
X	93	F	L	L::99.85(57464)
X	94	F	H	H::99.73(60208)
X	95	F	K	K::99.91(63600)
X	96	F	R	R::99.33(65751)
X	97	F	T	T::99.92(69992)

X	98	F	L	L::99.87(70131)
X	99	F	G	G::98.89(79201)
X	100	F	L	L::99.94(83658)
X	101	F	S	S::99.87(83638)
X	102	F	V	V::78.71(62287) A::20.59(16291)
X	103	F	M	M::99.69(85855)
X	104	F	S	S::99.93(86046)
X	105	F	T	T::99.60(86373)
X	106	F	T	T::99.72(89142)
X	107	F	D	D::99.50(89820)
X	108	F	L	L::99.90(90222)
X	109	F	E	E::99.50(89450)
X	110	F	A	A::99.34(88570)
X	111	F	Y	Y::99.79(88898)
X	113	F	K	K::99.64(87880)
X	114	F	D	D::99.42(87720)
X	115	F	C	C::99.49(87400)
X	116	F	L	L::99.74(87528)
X	118	F	K	K::99.60(85604)
X	119	F	D	D::96.47(82802)
X	120	F	W	W::99.29(83991)
X	121	F	E	E::99.52(83032)
X	122	F	E	E::99.50(81986)
X	123	F	L	L::89.29(72327) S::10.52(8522)
X	124	F	G	G::99.42(79483)
X	125	F	E	E::99.50(77833)
X	126	F	E	E::99.57(72722)
X	127	F	I	I::99.77(70900)
X	128	F	R	R::99.15(68375)
X	129	F	L	L::98.96(67088)
X	130	F	K	K::72.88(18577) N::13.38(3410) M::10.98(2799)
X	131	F	V	V::72.14(17908) Y::13.69(3398) I::11.48(2849)
X	132	F	F	F::92.02(24727) I::7.89(2121)
X	133	F	V	V::99.40(24237)
X	134	F	L	L::99.66(55217)
X	135	F	G	G::99.21(59203)
X	136	F	G	G::99.38(59288)
X	137	F	C	C::99.49(59120)
X	138	F	R	R::99.81(59273)
X	139	F	H	H::99.88(58855)
X	140	F	K	K::99.92(58604)
X	141	F	L	L::99.80(58234)
X	142	F	V	V::99.91(58160)
X	143	F	C	C::99.74(56926)
X	144	F	A	A::99.50(55119)
X	145	F	P	P::99.75(53808)
X	146	F	A	A::99.47(51017)
X	147	F	P	P::99.86(46019)
X	148	F	C	C::99.46(41471)
X	149	F	N	N::99.87(37137)
X	152	F	T	T::99.17(9641)

X	153	F	S	S::99.78(9836)
C	1	F	M	M::99.83(29285)
C	2	F	D	D::99.72(29849)
C	3	F	I	I::99.63(29899)
C	4	F	D	D::99.78(29498)
C	5	F	P	P::99.70(29948)
C	6	F	Y	Y::99.90(29987)
C	7	F	K	K::99.94(31014)
C	8	F	E	E::99.92(31394)
C	10	F	G	G::99.86(31796)
C	11	F	A	A::99.82(32105)
C	12	F	T	T::99.82(32409)
C	13	F	V	V::99.17(32559)
C	14	F	E	E::99.55(32620)
C	15	F	L	L::99.85(32690)
C	16	F	L	L::99.92(33042)
C	17	F	S	S::99.77(32871)
C	19	F	L	L::99.93(33392)
C	20	F	P	P::99.79(33571)
C	21	F	S	S::99.91(33533)
C	22	F	D	D::99.88(33644)
C	25	F	P	P::99.69(33545)
C	26	F	S	S::99.81(33334)
C	27	F	V	V::99.87(33472)
C	28	F	R	R::99.88(32627)
C	29	F	D	D::99.96(33214)
C	30	F	L	L::99.73(32802)
C	31	F	L	L::84.41(27262) Q::15.54(5019)
C	32	F	D	D::99.79(26760)
C	33	F	T	T::99.89(26566)
C	34	F	A	A::99.94(31937)
C	35	F	S	S::99.75(31347)
C	36	F	A	A::99.91(31614)
C	37	F	L	L::99.91(29439)
C	38	F	Y	Y::99.90(23785)
C	39	F	R	R::99.90(23359)
C	40	F	E	E::60.49(11609) D::39.12(7508)
C	41	F	A	A::99.84(18015)
C	42	F	L	L::99.89(17672)
C	43	F	E	E::99.69(17224)
C	44	F	S	S::99.97(17744)
C	45	F	P	P::99.33(17600)
C	46	F	E	E::98.04(16983)
C	47	F	H	H::99.91(17304)
C	48	F	C	C::99.42(17210)
C	49	F	S	S::99.93(17379)
C	50	F	P	P::99.80(17578)
C	51	F	H	H::99.56(19552)
C	52	F	H	H::99.76(19337)
C	53	F	T	T::99.90(19942)
C	54	F	A	A::99.49(20083)

C	55	F	L	L::99.93(20138)
C	56	F	R	R::99.80(19694)
C	57	F	Q	Q::99.91(19431)
C	58	F	A	A::99.91(19044)
C	59	F	I	I::99.71(19386)
C	60	F	L	L::91.35(17636) F::8.60(1661)
C	61	F	C	C::99.80(19336)
C	62	F	W	W::99.80(19720)
C	63	F	G	G::99.37(19218)
C	64	F	D	D::63.91(12179) E::33.84(6449)
C	65	F	L	L::99.90(19700)
C	66	F	M	M::89.52(17850) I::10.28(2050)
C	67	F	T	T::84.86(16823) N::15.08(2990)
C	68	F	L	L::99.92(20051)
C	69	F	A	A::87.21(17228) G::12.69(2506)
C	70	F	T	T::99.83(20720)
C	71	F	W	W::99.56(20937)
C	72	F	V	V::99.86(21212)
C	73	F	G	G::99.84(21184)
C	74	F	G	G::53.93(11044) V::33.58(6877) A::11.93(2444)
C	75	F	N	N::81.26(17592) S::18.48(4001)
C	76	F	L	L::99.88(21835)
C	77	F	E	E::99.72(22119)
C	78	F	D	D::99.74(21084)
C	79	F	P	P::99.30(20871)
C	80	F	I	I::52.80(10910) A::41.81(8639) V::5.26(1086)
C	81	F	S	S::99.68(21887)
C	82	F	R	R::99.71(22131)
C	83	F	D	D::99.82(22180)
C	84	F	L	L::99.69(21967)
C	85	F	V	V::99.82(21944)
C	86	F	V	V::99.90(21707)
C	87	F	S	S::83.01(19573) G::16.42(3871)
C	88	F	Y	Y::99.56(23749)
C	89	F	V	V::99.78(23227)
C	90	F	N	N::99.73(23229)
C	91	F	T	T::99.94(24245)
C	92	F	N	N::82.97(20092) T::15.52(3758)
C	93	F	M	M::75.44(18269) V::16.38(3968) T::5.01(1213)
C	94	F	G	G::99.56(24659)
C	95	F	L	L::99.84(24651)
C	96	F	K	K::99.78(24902)
C	98	F	R	R::99.46(24986)
C	99	F	Q	Q::98.34(24407)
C	100	F	L	L::99.76(24485)
C	101	F	L	L::99.87(25116)
C	102	F	W	W::99.33(25188)
C	104	F	H	H::99.68(25517)
C	105	F	I	I::99.74(25750)
C	106	F	S	S::99.76(25701)
C	107	F	C	C::99.72(25528)



C	108	F	L	L::99.82(25731)
C	109	F	T	T::99.68(25894)
C	111	F	G	G::99.32(25094)
C	112	F	R	R::99.63(25315)
C	113	F	E	E::99.44(25265)
C	114	F	T	T::99.41(24529)
C	115	F	V	V::99.02(24804)
C	116	F	I	I::99.62(24877)
C	117	F	E	E::99.54(24786)
C	118	F	Y	Y::99.74(24802)
C	119	F	L	L::99.59(24477)
C	120	F	V	V::99.88(24472)
C	121	F	S	S::99.87(24364)
C	123	F	G	G::99.87(23963)
C	124	F	V	V::99.93(23909)
C	125	F	W	W::99.47(23854)
C	126	F	I	I::99.87(23895)
C	127	F	R	R::99.13(23206)
C	128	F	T	T::99.95(23611)
C	129	F	P	P::99.64(23389)
C	130	F	P	P::87.02(20105) Q::12.80(2957)
C	131	F	A	A::99.88(23317)
C	132	F	Y	Y::99.84(23212)
C	133	F	R	R::99.59(23183)
C	134	F	P	P::99.82(23172)
C	135	F	P	P::99.52(23141)
C	136	F	N	N::99.96(23452)
C	137	F	A	A::99.80(23584)
C	138	F	P	P::99.77(23773)
C	139	F	I	I::99.90(23810)
C	140	F	L	L::99.95(23726)
C	141	F	S	S::99.97(23901)
C	142	F	T	T::99.69(23905)
C	143	F	L	L::85.37(20346) T::14.36(3422)
C	144	F	P	P::99.85(23804)
C	145	F	E	E::99.67(23811)
C	146	F	T	T::57.01(13439) N::42.88(10108)
C	147	F	T	T::99.90(24309)
C	148	F	V	V::99.79(24284)
C	149	F	V	V::99.77(24308)
C	150	F	R	R::99.54(24044)
C	151	F	R	R::99.70(23624)
C	152	F	R	R::99.86(23250)
C	153	F	G	G::99.71(24474)
C	154	F	R	R::99.77(24609)
C	155	F	S	S::98.68(24346)
C	156	F	P	P::99.57(24974)
C	157	F	R	R::99.32(24950)
C	158	F	R	R::99.58(25276)
C	159	F	R	R::99.64(25883)
C	160	F	T	T::99.94(26370)

C	161	F	P	P::99.53(26623)
C	162	F	S	S::99.93(26683)
C	163	F	P	P::99.96(27494)
C	164	F	R	R::99.35(27927)
C	165	F	R	R::99.80(29135)
C	166	F	R	R::99.48(29081)
C	167	F	R	R::99.42(29057)
C	168	F	S	S::90.19(26711) F::9.69(2869)
C	169	F	Q	Q::99.81(30006)
C	170	F	S	S::99.92(30126)
C	171	F	P	P::99.92(30494)
C	172	F	R	R::99.84(30646)
C	173	F	R	R::99.46(30755)
C	174	F	R	R::69.05(21206) *:30.65(9411)
C	175	F	R	R::99.59(31444)
C	176	F	S	S::99.89(31536)
C	177	F	Q	Q::99.19(31289)
C	178	F	S	S::98.79(30874)
C	179	F	R	R::55.06(15802) P::44.80(12856)
C	180	F	E	E::54.65(15694) A::44.69(12833)
C	181	F	S	S::99.42(28395)
C	182	F	Q	Q::99.06(32135)
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P1	1	F	M	M::99.87(23502)
P1	2	F	P	P::99.84(23626)
P1	3	F	L	L::99.94(23736)
P1	4	F	S	S::99.96(23865)
P1	5	F	Y	Y::99.94(23824)
P1	6	F	Q	Q::99.80(23956)
P1	7	F	H	H::85.44(20364) Q::14.37(3424)
P1	8	F	F	F::85.34(20255) L::14.62(3469)
P1	9	F	R	R::99.56(23803)
P1	10	F	R	R::99.66(23745)
P1	11	F	L	L::57.24(13447) I::42.71(10035)
P1	12	F	L	L::99.91(24206)
P1	13	F	L	L::99.93(24240)
P1	14	F	L	L::99.84(23940)
P1	15	F	D	D::99.54(24176)
P1	16	F	D	D::57.00(13274) E::42.76(9957)
P1	17	F	E	E::99.90(24373)
P1	18	F	A	A::99.73(24379)
P1	19	F	G	G::99.82(24632)
P1	20	F	P	P::99.84(24822)
P1	21	F	L	L::99.79(24611)
P1	22	F	E	E::99.59(24931)
P1	23	F	E	E::99.58(25357)
P1	24	F	E	E::99.65(25994)
P1	25	F	L	L::99.94(26380)
P1	26	F	P	P::99.94(26825)
P1	27	F	R	R::99.81(27062)
P1	28	F	L	L::99.91(27607)
P1	29	F	A	A::99.34(27959)

P1	30	F	D	D::99.81(29319)
P1	31	F	E	E::99.50(29429)
P1	32	F	G	G::60.21(17588) D::39.21(11455)
P1	33	F	L	L::90.21(26738) F::9.70(2874)
P1	34	F	N	N::99.81(29996)
P1	35	F	R	R::99.58(30383)
P1	36	F	R	R::99.81(30525)
P1	37	F	V	V::99.82(30934)
P1	38	F	A	A::99.58(30263)
P1	39	F	E	E::99.65(31022)
P1	40	F	D	D::99.60(31478)
P1	41	F	L	L::99.81(31514)
P1	42	F	N	N::99.81(31567)
P1	43	F	L	L::98.80(30831)
P1	44	F	G	G::54.74(15740) Q::44.86(12899)
P1	45	F	N	N::55.14(15827) L::44.71(12833)
P1	46	F	L	L::54.86(15815) P::44.89(12942)
P1	47	F	N	N::99.95(32804)
P1	48	F	V	V::99.80(32626)
P1	49	F	S	S::84.35(27940) N::15.49(5130)
P1	50	F	I	I::99.88(33505)
P1	51	F	P	P::99.90(33404)
P1	52	F	W	W::99.48(33711)
P1	53	F	T	T::99.91(34439)
P1	54	F	H	H::99.93(33707)
P1	55	F	K	K::99.88(34724)
P1	56	F	V	V::99.91(34887)
P1	57	F	G	G::99.38(33649)
P1	58	F	N	N::99.94(34045)
P1	60	F	T	T::99.80(35365)
P1	61	F	G	G::99.89(35224)
P1	62	F	L	L::99.93(35183)
P1	63	F	Y	Y::99.93(34546)
P1	64	F	S	S::99.95(35097)
P1	65	F	S	S::99.92(35040)
P1	66	F	T	T::99.95(34315)
P1	67	F	V	V::60.38(20086) I::39.55(13159)
P1	68	F	P	P::99.90(34204)
P1	69	F	V	V::99.68(34254)
P1	71	F	N	N::99.92(33859)
P1	72	F	P	P::99.91(33504)
P1	73	F	H	H::59.94(18938) N::40.00(12639)
P1	74	F	W	W::99.45(32049)
P1	75	F	K	K::99.87(32573)
P1	76	F	T	T::99.94(30379)
P1	77	F	P	P::99.95(30099)
P1	78	F	S	S::99.61(30426)
P1	80	F	P	P::99.66(29196)
P1	81	F	N	N::56.61(15162) D::43.17(11563)
P1	82	F	I	I::99.92(26664)
P1	83	F	H	H::99.95(27983)

P1	84	F	L	L::99.86(27849)
P1	85	F	H	H::99.93(28145)
P1	86	F	Q	Q::99.86(27303)
P1	87	F	D	D::99.71(27776)
P1	88	F	I	I::99.63(27545)
P1	89	F	I	I::99.93(27422)
P1	90	F	K	K::60.52(16039) N::39.44(10454)
P1	91	F	K	K::99.89(27018)
P1	92	F	C	C::99.80(26846)
P1	93	F	E	E::99.52(26248)
P1	94	F	Q	Q::99.82(26154)
P1	96	F	V	V::99.83(24563)
P1	97	F	G	G::99.85(22126)
P1	98	F	P	P::99.88(22023)
P1	99	F	L	L::99.84(21685)
P1	100	F	T	T::99.80(21554)
P1	101	F	V	V::99.95(21580)
P1	102	F	N	N::99.96(21582)
P1	103	F	E	E::99.71(19703)
P1	104	F	K	K::99.95(19654)
P1	105	F	R	R::99.85(19371)
P1	106	F	R	R::99.87(19258)
P1	107	F	L	L::99.97(16192)
P1	108	F	N	N::50.64(8252) Q::49.16(8011)
P1	109	F	L	L::99.96(16272)
P1	110	F	V	V::50.46(8201) I::49.49(8043)
P1	111	F	M	M::99.84(16199)
P1	112	F	P	P::99.96(16277)
P1	113	F	A	A::99.94(16255)
P1	114	F	R	R::99.80(16055)
P1	116	F	F	F::70.30(8091) Y::29.66(3414)
P1	117	F	P	P::99.91(11386)
P1	118	F	I	I::70.06(7978) K::29.79(3393)
P1	119	F	S	S::69.78(7854) V::30.19(3398)
P1	120	F	T	T::99.86(11334)
P1	121	F	K	K::99.93(15153)
P1	122	F	Y	Y::99.94(14959)
P1	123	F	L	L::99.94(14810)
P1	124	F	P	P::99.77(14687)
P1	125	F	L	L::99.95(14627)
P1	126	F	E	E::51.15(7546) D::48.82(7203)
P1	127	F	K	K::99.91(14767)
P1	128	F	G	G::99.85(16026)
P1	129	F	I	I::99.95(15978)
P1	130	F	K	K::99.94(16320)
P1	131	F	P	P::99.79(16392)
P1	132	F	Y	Y::99.90(16368)
P1	133	F	Y	Y::99.86(16729)
P1	134	F	P	P::99.93(16234)
P1	135	F	E	E::50.81(7432) D::48.75(7130)
P1	136	F	H	H::51.10(7455) N::48.84(7125)

P1	137	F	L	L::51.15(7437) V::48.65(7074)
P1	138	F	V	V::93.39(14158) I::6.56(994)
P1	139	F	N	N::90.88(13875) T::6.99(1067)
P1	140	F	H	H::99.93(15166)
P1	141	F	Y	Y::99.95(14898)
P1	143	F	Q	Q::99.78(14542)
P1	144	F	T	T::99.94(14586)
P1	145	F	R	R::99.64(14464)
P1	146	F	H	H::99.95(14427)
P1	147	F	Y	Y::99.88(14502)
P1	148	F	L	L::99.85(14535)
P1	149	F	H	H::99.86(14527)
P1	150	F	T	T::99.93(14369)
P1	151	F	L	L::99.94(14692)
P1	152	F	W	W::99.58(14626)
P1	153	F	K	K::99.75(14492)
P1	154	F	A	A::99.70(14119)
P1	155	F	G	G::99.61(12649)
P1	156	F	V	V::53.79(6813) I::46.14(5845)
P1	157	F	L	L::99.80(12538)
P1	158	F	Y	Y::99.90(12572)
P1	159	F	K	K::99.94(12534)
P1	160	F	R	R::99.77(12438)
P1	161	F	E	E::99.51(11970)
P1	162	F	T	T::99.93(11672)
P1	163	F	T	T::99.78(11615)
P1	164	F	H	H::52.57(5884) R::47.34(5298)
P1	165	F	S	S::99.69(11078)
P1	166	F	A	A::99.94(10884)
P1	167	F	S	S::99.82(10535)
P1	169	F	C	C::99.55(9948)
P1	170	F	G	G::99.60(9805)
P1	171	F	S	S::99.77(9488)
P1	172	F	P	P::99.92(9150)
P1	173	F	Y	Y::99.95(9147)
P1	174	F	S	S::99.94(8887)
P1	175	F	W	W::99.76(8566)
P1	176	F	E	E::99.59(8333)
P1	177	F	Q	Q::99.60(7977)
P1	178	F	E	E::99.65(7927)
P1	179	F	L	L::99.87(7563)
P1	180	F	H	H::61.93(4415) Q::38.01(2710)
P1	181	F	H	H::99.80(7029)
P1	182	F	G	G::99.91(6790)
P1	183	F	A	A::99.47(4112)
P1	185	F	L	L::99.67(3939)
P1	186	F	D	D::99.77(3896)
P1	187	F	G	G::99.63(3794)
P1	188	F	P	P::99.84(3691)
P1	189	F	S	S::99.95(3662)
P1	190	F	R	R::100.00(3489)

P1	191	F	M	M::99.94(3463)
P1	192	F	G	G::99.96(5654)
P1	193	F	E	E::59.37(3273) A::40.23(2218)
P1	194	F	E	E::99.76(5870)
P1	195	F	S	S::99.86(5875)
P1	197	F	H	H::99.75(6082)
P1	198	F	H	H::53.15(3240) Q::46.83(2855)
P1	199	F	Q	Q::97.72(6038)
P1	200	F	S	S::99.90(6206)
P1	201	F	S	S::99.73(6262)
P1	202	F	G	G::99.86(6399)
P1	203	F	I	I::99.41(6424)
P1	204	F	L	L::51.68(3296) F::48.20(3074)
P1	205	F	S	S::99.64(6379)
P1	206	F	R	R::99.57(6448)
P1	207	F	P	P::99.83(6480)
P1	208	F	P	P::93.74(6174) S::6.24(411)
P1	209	F	V	V::99.43(6647)
P1	210	F	G	G::99.82(6753)
P1	211	F	S	S::99.93(6781)
P1	212	F	S	S::99.82(6732)
P1	213	F	L	L::59.34(3998) I::40.47(2727)
P1	214	F	Q	Q::98.32(6657)
P1	215	F	S	S::99.60(6803)
P1	216	F	K	K::99.55(6800)
P1	217	F	H	H::99.93(6828)
P1	218	F	R	R::59.41(4069) Q::39.71(2720)
P1	219	F	K	K::99.73(6904)
P1	220	F	S	S::99.74(6946)
P1	221	F	R	R::99.54(6937)
P1	222	F	L	L::99.91(6825)
P1	223	F	G	G::99.68(6602)
P1	224	F	L	L::57.28(3552) P::42.19(2616)
P1	225	F	Q	Q::99.67(6327)
P1	226	F	S	S::98.44(6233)
P1	227	F	Q	Q::99.84(6142)
P1	228	F	Q	Q::99.85(6033)
P1	229	F	G	G::50.38(2614) R::49.28(2557)
P1	230	F	H	H::50.43(2610) P::49.36(2555)
P1	231	F	L	L::99.77(5139)
P1	232	F	A	A::50.91(2607) D::36.65(1877) V::12.20(625)
P1	233	F	G	G::50.87(2613) R::48.94(2514)
P1	234	F	R	R::50.45(2613) S::49.35(2556)
P1	235	F	Q	Q::99.86(5623)
P1	236	F	Q	Q::99.89(5619)
P1	237	F	G	G::99.51(5536)
P1	238	F	R	R::99.84(5457)
P1	239	F	S	S::84.36(4311) G::15.46(790)
P1	240	F	G	G::64.14(3270) W::35.45(1807)
P1	241	F	S	S::99.89(4474)
P1	242	F	I	I::99.67(4538)

P1	243	F	R	R::99.75(4462)
P1	244	F	A	A::99.86(4273)
P1	245	F	W	W::56.95(2373) G::41.88(1745)
P1	246	F	V	V::48.38(2061) I::41.67(1775) G::9.62(410)
P1	247	F	H	H::99.60(4266)
P1	248	F	S	S::61.02(2506) P::38.98(1601)
P1	249	F	P	P::61.07(2523) T::38.68(1598)
P1	250	F	T	T::60.89(2493) A::38.94(1594)
P1	251	F	R	R::99.48(4203)
P1	252	F	R	R::99.95(4206)
P1	253	F	P	P::99.76(4189)
P1	254	F	F	F::60.08(2479) L::39.80(1642)
P1	255	F	G	G::99.69(4170)
P1	256	F	V	V::98.99(4114)
P1	257	F	E	E::99.85(4087)
P1	258	F	P	P::99.83(4048)
P1	259	F	S	S::99.95(4044)
P1	260	F	G	G::99.58(4016)
P1	261	F	S	S::99.85(4080)
P1	262	F	R	R::60.32(2463) G::39.36(1607)
P1	263	F	H	H::99.66(4129)
P1	264	F	T	T::55.69(2231) A::44.01(1763)
P1	265	F	K	K::59.78(2421) T::39.80(1612)
P1	266	F	N	N::99.78(4131)
P1	267	F	I	I::58.72(2411) L::41.04(1685)
P1	268	F	A	A::99.66(4075)
P1	269	F	S	S::60.48(2340) N::39.34(1522)
P1	270	F	R	R::59.66(2254) K::40.29(1522)
P1	271	F	S	S::99.87(3903)
P1	272	F	A	A::99.41(3868)
P1	273	F	S	S::99.80(3489)
P1	274	F	C	C::99.68(3434)
P1	275	F	L	L::99.80(3462)
P1	276	F	H	H::99.88(3417)
P1	277	F	Q	Q::99.91(3358)
P1	278	F	S	S::99.91(3295)
P1	279	F	A	A::60.83(1955) P::38.99(1253)
P1	280	F	V	V::99.87(3190)
P1	281	F	R	R::99.74(3129)
P1	282	F	K	K::99.80(3035)
P1	283	F	A	A::99.18(2912)
P1	284	F	A	A::99.55(2873)
P1	285	F	Y	Y::99.18(2793)
P1	286	F	P	P::99.78(2770)
P1	287	F	N	N::60.81(1589) S::38.61(1009)
P1	288	F	H	H::59.91(1535) V::39.42(1010)
P1	289	F	S	S::99.96(2541)
P1	290	F	T	T::99.92(2484)
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S1	1	F	M	M::99.71(6979)
S1	2	F	G	G::99.96(6706)
S1	3	F	L	L::99.88(4093)

S1	4	F	S	S::99.93(4064)
S1	5	F	W	W::99.41(3900)
S1	6	F	T	T::99.77(3868)
S1	7	F	V	V::99.60(3759)
S1	8	F	P	P::99.84(3683)
S1	9	F	L	L::99.61(3611)
S1	10	F	E	E::99.94(3506)
S1	11	F	W	W::99.91(3464)
S1	12	F	G	G::99.96(5610)
S1	13	F	K	K::59.69(3304) Q::40.07(2218)
S1	14	F	N	N::99.88(5941)
S1	15	F	H	H::54.92(3229) L::44.55(2619)
S1	16	F	S	S::99.67(5967)
S1	17	F	T	T::99.80(6096)
S1	18	F	T	T::52.93(3219) S::46.53(2830)
S1	19	F	N	N::97.80(6085)
S1	20	F	P	P::99.63(6257)
S1	21	F	L	L::99.70(6264)
S1	22	F	G	G::99.80(6421)
S1	25	F	P	P::99.89(6470)
S1	26	F	D	D::99.41(6414)
S1	27	F	H	H::99.91(6543)
S1	28	F	Q	Q::99.58(6610)
S1	29	F	L	L::99.84(6670)
S1	30	F	D	D::99.76(6765)
S1	31	F	P	P::99.94(6784)
S1	32	F	A	A::99.76(6698)
S1	34	F	R	R::99.65(6791)
S1	35	F	A	A::99.53(6776)
S1	36	F	N	N::99.68(6818)
S1	37	F	T	T::99.93(6831)
S1	38	F	A	A::59.44(4060) R::39.30(2684)
S1	39	F	N	N::99.77(6925)
S1	40	F	P	P::99.74(7003)
S1	41	F	D	D::99.77(6865)
S1	42	F	W	W::99.84(6750)
S1	43	F	D	D::99.74(6601)
S1	44	F	F	F::57.39(3567) H::42.28(2628)
S1	45	F	N	N::99.73(6334)
S1	46	F	P	P::98.58(6253)
S1	47	F	N	N::99.80(6115)
S1	48	F	K	K::99.75(5181)
S1	49	F	D	D::99.61(5163)
S1	50	F	T	T::50.34(2612) H::49.41(2564)
S1	51	F	W	W::99.51(5085)
S1	52	F	P	P::51.43(2617) T::36.26(1845) S::12.28(625)
S1	53	F	D	D::50.51(2600) E::49.09(2527)
S1	54	F	A	A::99.77(5567)
S1	55	F	N	N::99.89(5617)
S1	56	F	K	K::99.68(5628)
S1	57	F	V	V::99.64(5462)



S1	58	F	G	G::99.92(5326)
S1	59	F	V	V::64.38(3288) A::35.46(1811)
S1	60	F	G	G::99.89(4417)
S1	61	F	A	A::99.65(4497)
S1	63	F	G	G::99.71(4422)
S1	64	F	P	P::60.78(2532) L::39.20(1633)
S1	65	F	G	G::99.22(4195)
S1	66	F	F	F::89.36(3787) V::9.72(412)
S1	67	F	T	T::99.98(4112)
S1	68	F	P	P::100.00(4136)
S1	69	F	P	P::99.73(4117)
S1	70	F	H	H::99.76(4207)
S1	71	F	G	G::99.31(4181)
S1	72	F	G	G::99.86(4197)
S1	73	F	L	L::99.59(4118)
S1	74	F	L	L::98.90(4117)
S1	75	F	G	G::99.45(4135)
S1	76	F	W	W::99.49(4129)
S1	77	F	S	S::99.63(4062)
S1	78	F	P	P::99.85(4059)
S1	79	F	Q	Q::99.83(4032)
S1	80	F	A	A::99.27(4058)
S1	81	F	Q	Q::99.88(4074)
S1	82	F	G	G::98.96(4094)
S1	83	F	I	I::55.36(2240) M::44.41(1797)
S1	84	F	L	L::98.56(3970)
S1	85	F	K	K::59.73(2416) Q::39.88(1613)
S1	86	F	T	T::99.88(4089)
S1	87	F	L	L::99.90(4098)
S1	88	F	P	P::99.73(4023)
S1	89	F	A	A::59.36(2239) T::40.35(1522)
S1	90	F	D	D::59.71(2260) N::40.21(1522)
S1	91	F	P	P::99.90(3897)
S1	92	F	P	P::99.94(3483)
S1	93	F	P	P::100.00(3488)
S1	94	F	A	A::99.77(3457)
S1	95	F	S	S::99.86(3455)
S1	96	F	T	T::99.53(3389)
S1	97	F	N	N::99.88(3340)
S1	98	F	R	R::99.78(3247)
S1	99	F	Q	Q::99.66(3191)
S1	100	F	S	S::99.84(3165)
S1	101	F	G	G::99.68(3070)
S1	102	F	R	R::99.97(3009)
S1	103	F	Q	Q::99.35(2906)
S1	104	F	P	P::99.37(2835)
S1	105	F	T	T::99.96(2807)
S1	106	F	P	P::99.81(2626)
S1	107	F	I	I::60.50(1564) L::39.42(1019)
S1	108	F	T	T::60.51(1549) S::39.30(1006)
S1	109	F	P	P::100.00(2507)

S1	110	F	P	P::100.00(2460)
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Meta data	
Assembly file:	HBV-RYD-8.sam
Annotation file:	/home3/vatt01s/Work/Project-150-HBV/Data/P150-1/Annotation/HBV.anno
Reference file:	KX186584.fa.
User name	ales01a
Hostname	Alpha
Location	/home2/ales01a/HBV/P150-5/HBV-RYD-8
Date/Time	Mon 25 Mar 17:45:54 GMT 2019