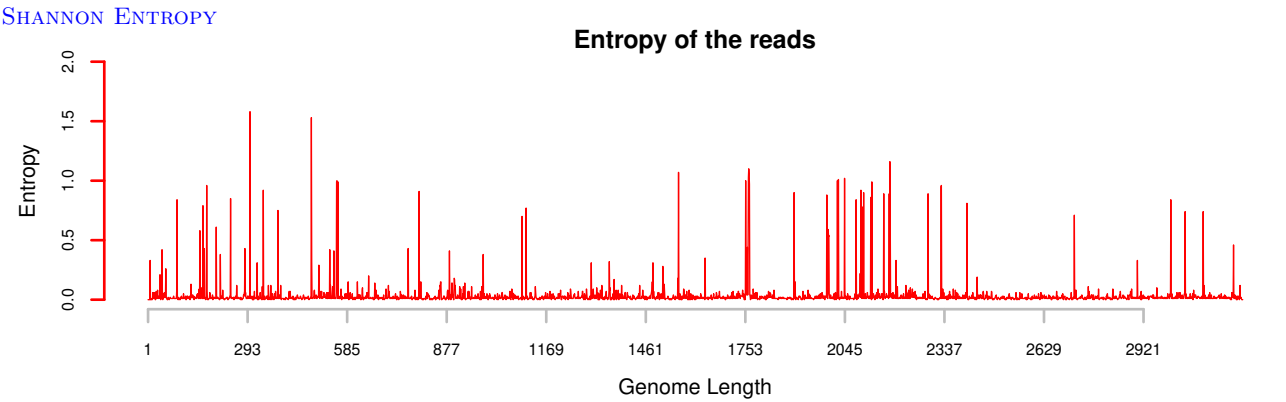
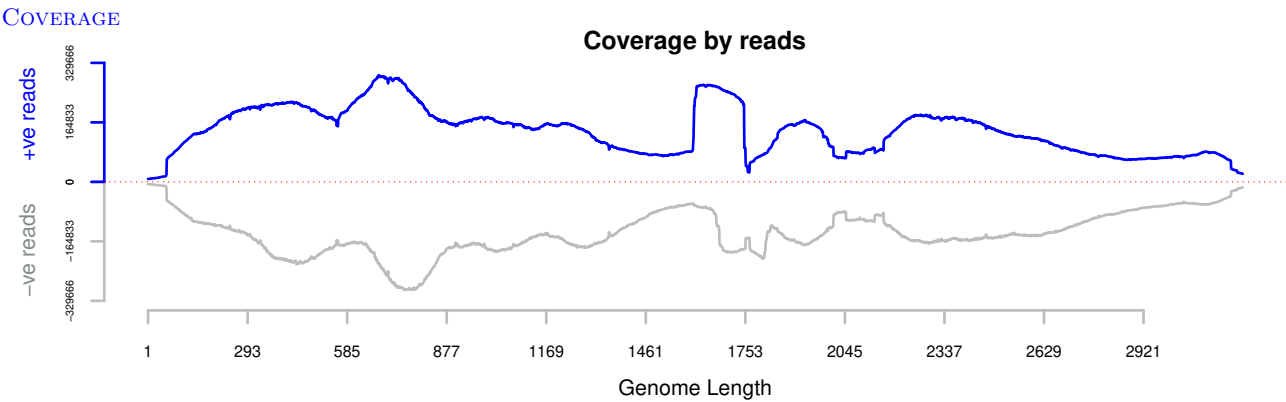
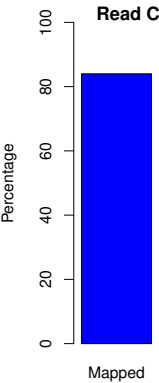


HBV-RYD-1

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

Total reads	7402036
Mapped reads	6252927 (84.48%)
Unmapped reads	1149109
Mapped loan pairs	40870
Average read length	148nt

Coverage	3212nt (100.00%)
Average depth	282475 reads/site
Average insert length	1796nt



CONSENSUS SEQUENCE

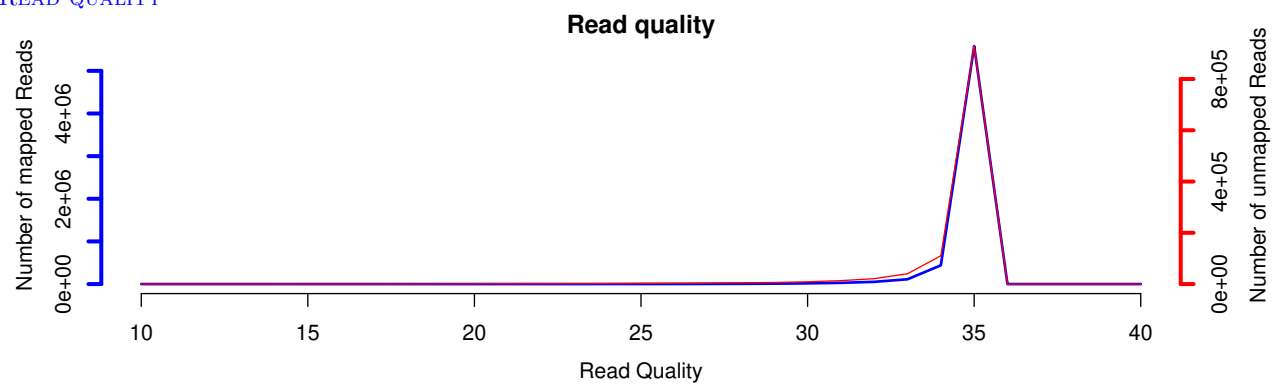
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140    ACCCTGCACC GAACATGGAA AGCATCACAT CAGGATTCCCT AGGACCCCTG CTCGTGTTAC AGGCGGGGTT
210    TTTCTTGTG ACAAAAATCC TCACAATACC TCAGAGTCTA GACTCGTGGT GGACTTCTCT CAATTTTCTA
280    GGGGGAGCTC CCGTGTGTCT TGGCCAAAAT TCGCAGTCCC CAACCTCCAG TCACTACCA ACCTCTGTCT
350    CTCCAATTG TCCTGGCTAT CGCTGGATGT GTCTGCGGCG TTTTATCATC TTCCTCTTCA TCCTGCTGCT
420    ATGCCTCATC TTCTTGTG TTTCTCTGGA CTATCAAGGT ATGTTGCCCC TTTGTCCTCT AATTCCAGGA
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630    AAAATTCCTA TGGGAGTGGG CCTCAGCCCG TTTCTCCTGG CTCAGTTTAC TAGTGCCATT TGTTCACTGG
700    TTCGTGCGGC TTTCCCCCAC TGTCTGGCTT TCAGTTATAT GGATGATGTG GTATTGGGGG CCAAGTCTGT
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910    CACAGGAACA CATCAGAATG AAAATCAAAG ACTGTTTGTAG AAAACTCCCT GTTAACCCGC CTATTGATTG
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1050   TTAATGCCTC TGTATGCGTG TACTCAATCT AAGCAGGCTT TCACTTTCTC GCCAATTAC AAGGCCTTTC
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1260   CCGATCCATA CTGCGGAACCT CCTAGCCGCT TGTTTTGCTC GCAGCAGGTC TGGAGCGAAA CTTATCGGGA
1330   CAGATAATTC TGTGCTTCTC TCAAGGAAAT ATACATCATT TCCATGGCTG CTAGGCTGTG CTGCCAACTG
1400   GATCCTGCGA GGGACGTCTT TTGTCTACGT CCCGTACGCG CTGAATCCTG CGGACGACCC GTCTCGGGGT
1470   CGCTTGGGGA TCTATCGTCC CTTTCTCCGT CTGCCGTTCC AGCCGACCAC GGGGCGCACC TCTCTTACG
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1610   GAGACCACCG TGAACGCCA CCAAATATTG CCCAAGGTCT TACATAAGAG GACTCTTGA CTCTCTGCAA
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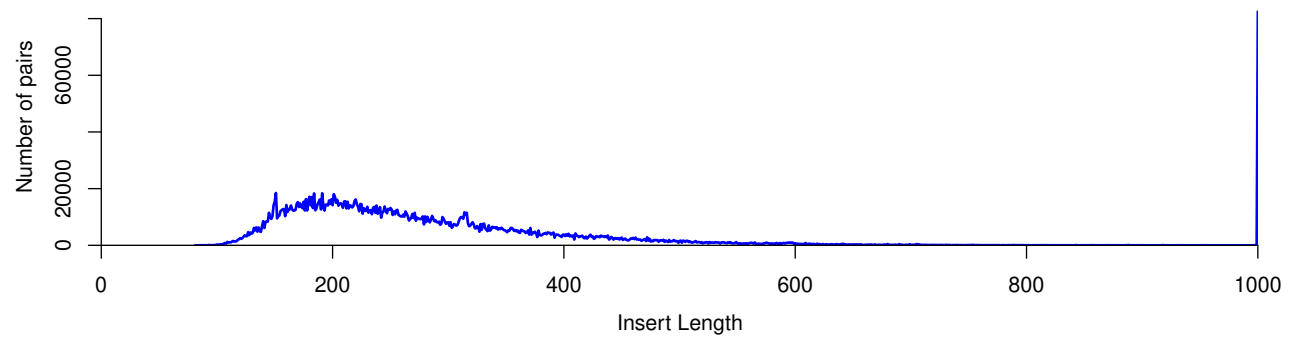
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Genome Composition	
A	755 (23.51%)
T	904 (28.14%)
G	697 (21.70%)
C	856 (26.65%)
N	0 (0.00%)
Total Nucleotides	3212
GC%	48.35

READ QUALITY



INSERT LENGTH DISTRIBUTION



AMINO ACID VARIATIONS

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::99.99(14925)
P2	2	F	D	D::93.90(14016) N::6.08(908)
P2	3	F	I	I::99.93(16368)
P2	4	F	P	P::99.92(16813)
P2	5	F	P	P::99.91(17448)
P2	6	F	S	S::98.98(17874)
P2	7	F	S	S::99.97(18297)
P2	8	F	A	A::98.99(19004)
P2	9	F	G	G::99.09(19989)
P2	10	F	S	S::99.72(21018)
P2	11	F	Q	Q::99.49(21936)
P2	12	F	S	S::99.16(22645)
P2	13	F	K	K::99.20(23455)
P2	14	F	R	R::99.70(24615)
P2	15	F	P	P::99.36(25216)
P2	16	F	V	V::99.48(25995)
P2	18	F	S	S::99.96(39395)
P2	19	F	C	C::99.95(117415)
P2	20	F	W	W::99.86(122655)
P2	21	F	W	W::99.67(127028)
P2	22	F	L	L::99.89(131026)
P2	23	F	Q	Q::99.90(135899)
P2	25	F	R	R::99.77(144967)
P2	26	F	N	N::99.87(151133)
P2	27	F	S	S::99.76(155877)
P2	28	F	E	E::72.98(116309) A::25.90(41273)
P2	29	F	P	P::99.93(164959)
P2	30	F	C	C::99.86(168685)
P2	31	F	S	S::99.93(173599)
P2	32	F	D	D::99.79(181824)
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P2	34	F	C	C::99.84(190380)
P2	35	F	L	L::99.82(196263)
P2	36	F	T	T::99.71(201387)
P2	37	F	H	H::99.90(206569)
P2	38	F	L	L::99.62(207455)
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P2	40	F	N	N::99.85(220339)
P2	41	F	L	L::99.94(222575)
P2	42	F	L	L::98.09(220371)
P2	43	F	E	E::99.37(233216)
P2	44	F	D	D::99.77(238246)
P2	45	F	W	W::99.73(238241)
P2	46	F	G	G::99.76(238465)
P2	47	F	P	P::99.88(240706)
P2	48	F	C	C::99.35(238261)

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P2	53	F	K	K::99.49(244842)
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P2	55	F	H	H::91.73(231268) N::7.78(19608)
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P2	69	F	V	V::99.84(284680)
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P2	97	F	R	R::99.66(345384)
P2	98	F	V	V::99.67(349883)
P2	99	F	S	S::99.71(342810)
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P2	101	F	P	P::99.78(354805)
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P2	163	F	I	I::99.80(402980)
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P2	182	F	L	L::99.83(346378)
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P2	189	F	L	L::99.95(361212)
P2	191	F	K	K::99.81(361611)
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P2	271	F	L	L::99.84(459740)
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P2	286	F	G	G::97.05(351102)
P2	287	F	Y	Y::99.92(360819)
P2	288	F	S	S::99.79(358796)
P2	289	F	L	L::99.88(358549)
P2	290	F	N	N::99.81(357910)
P2	292	F	M	M::99.04(340881)
P2	293	F	G	G::98.97(338919)
P2	294	F	Y	Y::99.79(336896)
P2	295	F	V	V::99.06(334889)
P2	296	F	I	I::99.93(340311)
P2	297	F	G	G::97.43(327419)
P2	298	F	S	S::99.47(335164)
P2	299	F	W	W::97.33(326828)
P2	300	F	G	G::97.97(315429)
P2	301	F	S	S::99.80(332541)
P2	302	F	L	L::99.91(326741)
P2	303	F	P	P::99.76(335856)
P2	304	F	Q	Q::99.80(337829)
P2	305	F	E	E::98.15(332005)
P2	306	F	H	H::99.87(340746)
P2	307	F	I	I::99.92(341268)
P2	308	F	R	R::98.49(333558)
P2	309	F	M	M::97.93(333099)
P2	310	F	K	K::99.92(339122)
P2	311	F	I	I::99.91(340408)
P2	312	F	K	K::99.84(336837)
P2	313	F	D	D::98.65(335712)
P2	314	F	C	C::99.65(336491)
P2	316	F	R	R::98.65(331746)
P2	317	F	K	K::99.86(339164)
P2	318	F	L	L::99.91(338832)

P2	319	F	P	P::99.89(341582)
P2	320	F	V	V::99.49(340828)
P2	321	F	N	N::99.82(343526)
P2	322	F	R	R::99.65(340891)
P2	323	F	P	P::99.88(344599)
P2	324	F	I	I::99.92(348629)
P2	325	F	D	D::99.20(347915)
P2	326	F	W	W::98.11(341398)
P2	327	F	K	K::99.88(350602)
P2	328	F	V	V::99.85(342781)
P2	329	F	C	C::99.67(349353)
P2	330	F	Q	Q::99.80(354729)
P2	331	F	R	R::99.37(358059)
P2	332	F	I	I::99.80(361669)
P2	333	F	V	V::99.72(361128)
P2	334	F	G	G::99.34(358346)
P2	335	F	L	L::99.89(357313)
P2	336	F	L	L::99.85(359636)
P2	337	F	G	G::99.82(358447)
P2	339	F	A	A::99.21(353781)
P2	340	F	A	A::99.79(354551)
P2	341	F	P	P::99.93(355925)
P2	343	F	T	T::99.79(350564)
P2	344	F	Q	Q::99.85(348587)
P2	345	F	C	C::99.73(346248)
P2	346	F	G	G::99.03(341262)
P2	347	F	Y	Y::99.81(344552)
P2	348	F	P	P::99.84(344909)
P2	349	F	A	A::99.57(345613)
P2	350	F	L	L::99.93(343386)
P2	351	F	M	M::99.69(346009)
P2	352	F	P	P::99.85(345717)
P2	353	F	L	L::99.94(343186)
P2	354	F	Y	Y::99.88(342497)
P2	355	F	A	A::98.84(338072)
P2	356	F	C	C::99.20(335663)
P2	357	F	T	T::99.50(321933)
P2	358	F	Q	Q::99.49(332844)
P2	359	F	S	S::99.84(331640)
P2	360	F	K	K::99.86(331256)
P2	361	F	Q	Q::99.79(329487)
P2	362	F	A	A::99.66(328936)
P2	364	F	T	T::99.86(326387)
P2	366	F	S	S::99.90(314019)
P2	367	F	P	P::99.80(313970)
P2	368	F	T	T::99.91(315113)
P2	369	F	Y	Y::99.76(305861)
P2	370	F	K	K::99.84(307847)
P2	371	F	A	A::99.78(307128)
P2	373	F	L	L::99.93(300647)
P2	374	F	C	C::99.20(296829)

P2	375	F	K	K::99.55(295006)
P2	376	F	Q	Q::99.86(292326)
P2	377	F	Y	Y::99.92(292433)
P2	378	F	L	L::99.64(293234)
P2	379	F	N	N::99.11(291828)
P2	380	F	L	L::99.85(291307)
P2	381	F	Y	Y::99.83(287393)
P2	382	F	P	P::99.93(290849)
P2	383	F	V	V::99.84(293114)
P2	384	F	A	A::99.80(294048)
P2	385	F	R	R::99.76(295428)
P2	386	F	Q	Q::99.85(297769)
P2	387	F	R	R::99.86(297194)
P2	388	F	P	P::99.81(296780)
P2	389	F	G	G::99.65(298816)
P2	390	F	L	L::99.82(299042)
P2	391	F	C	C::99.70(302051)
P2	392	F	Q	Q::99.78(304043)
P2	393	F	V	V::99.11(304751)
P2	395	F	A	A::99.50(303595)
P2	396	F	D	D::99.37(303093)
P2	397	F	A	A::99.43(301419)
P2	398	F	T	T::99.90(304636)
P2	399	F	P	P::99.89(303196)
P2	400	F	T	T::99.89(303550)
P2	401	F	G	G::99.03(303654)
P2	402	F	W	W::99.33(302532)
P2	403	F	G	G::98.96(308333)
P2	404	F	L	L::99.94(311694)
P2	405	F	A	A::99.54(316067)
P2	406	F	I	I::99.73(318226)
P2	407	F	G	G::99.55(319799)
P2	408	F	H	H::99.83(324090)
P2	409	F	Q	Q::99.73(322773)
P2	410	F	R	R::99.29(322993)
P2	411	F	M	M::99.16(325535)
P2	412	F	R	R::99.62(326542)
P2	413	F	G	G::98.53(320701)
P2	414	F	T	T::99.90(328555)
P2	416	F	V	V::99.36(326048)
P2	417	F	A	A::99.28(324609)
P2	418	F	P	P::99.91(326385)
P2	419	F	L	L::99.85(323452)
P2	420	F	P	P::99.78(326423)
P2	421	F	I	I::99.86(325545)
P2	422	F	H	H::99.87(323294)
P2	423	F	T	T::99.72(323459)
P2	424	F	A	A::99.59(322705)
P2	425	F	E	E::99.11(318638)
P2	426	F	L	L::99.93(320044)
P2	427	F	L	L::99.57(315293)

P2	428	F	A	A::99.87(317453)
P2	429	F	A	A::99.42(315438)
P2	430	F	C	C::99.85(311708)
P2	432	F	A	A::99.70(306201)
P2	433	F	R	R::94.34(284228) H::5.59(16855)
P2	434	F	S	S::99.84(298614)
P2	435	F	R	R::98.77(290745)
P2	436	F	S	S::99.93(290923)
P2	437	F	G	G::99.52(283484)
P2	438	F	A	A::99.82(282970)
P2	439	F	K	K::98.94(278282)
P2	440	F	L	L::99.95(277996)
P2	441	F	I	I::99.94(277475)
P2	442	F	G	G::98.88(271984)
P2	443	F	T	T::99.88(271315)
P2	444	F	D	D::99.51(270298)
P2	445	F	N	N::99.89(272160)
P2	446	F	S	S::99.94(269478)
P2	447	F	V	V::99.63(265061)
P2	448	F	V	V::99.11(261529)
P2	449	F	L	L::99.92(258483)
P2	450	F	S	S::99.90(228866)
P2	451	F	R	R::99.00(226950)
P2	452	F	K	K::99.92(245807)
P2	453	F	Y	Y::99.77(247159)
P2	454	F	T	T::99.82(242420)
P2	455	F	S	S::99.94(240308)
P2	457	F	P	P::99.92(233659)
P2	458	F	W	W::99.31(227969)
P2	459	F	L	L::99.91(226861)
P2	460	F	L	L::99.96(221538)
P2	461	F	G	G::99.16(220228)
P2	462	F	C	C::99.57(217891)
P2	463	F	A	A::98.28(213369)
P2	464	F	A	A::99.59(215048)
P2	465	F	N	N::99.72(213690)
P2	466	F	W	W::98.99(209172)
P2	467	F	I	I::99.91(210069)
P2	468	F	L	L::99.93(207095)
P2	469	F	R	R::99.70(201837)
P2	470	F	G	G::99.73(201654)
P2	471	F	T	T::99.87(200992)
P2	472	F	S	S::99.92(201340)
P2	474	F	V	V::99.55(196638)
P2	475	F	Y	Y::99.65(193505)
P2	476	F	V	V::99.87(194174)
P2	477	F	P	P::99.87(190762)
P2	478	F	S	S::99.86(185626)
P2	479	F	A	A::99.71(184561)
P2	480	F	L	L::99.90(182580)
P2	481	F	N	N::99.83(181181)

P2	482	F	P	P::99.91(179676)
P2	483	F	A	A::99.52(178135)
P2	484	F	D	D::99.74(177529)
P2	485	F	D	D::99.57(175822)
P2	486	F	P	P::99.86(174073)
P2	487	F	S	S::99.92(172489)
P2	488	F	R	R::99.83(168964)
P2	489	F	G	G::99.78(164850)
P2	490	F	R	R::99.61(160377)
P2	491	F	L	L::99.91(158008)
P2	492	F	G	G::99.05(158156)
P2	493	F	I	I::92.72(146149) M::5.16(8134)
P2	494	F	Y	Y::99.06(154425)
P2	495	F	R	R::99.79(156188)
P2	496	F	P	P::99.90(156758)
P2	497	F	L	L::99.87(155363)
P2	498	F	L	L::99.76(151958)
P2	499	F	R	R::99.24(150826)
P2	500	F	L	L::99.93(149364)
P2	501	F	P	P::99.78(148644)
P2	503	F	Q	Q::95.13(138760)
P2	504	F	P	P::99.79(144509)
P2	505	F	T	T::99.22(144043)
P2	506	F	T	T::99.84(142432)
P2	507	F	G	G::99.85(142587)
P2	508	F	R	R::99.60(141594)
P2	509	F	T	T::99.82(142700)
P2	510	F	S	S::99.91(143359)
P2	511	F	L	L::99.95(143632)
P2	512	F	Y	Y::99.87(143717)
P2	513	F	A	A::99.78(143114)
P2	514	F	V	V::99.80(143497)
P2	515	F	S	S::99.88(141932)
P2	516	F	P	P::99.86(143337)
P2	517	F	S	S::99.90(144464)
P2	518	F	V	V::97.27(136384)
P2	519	F	P	P::99.91(143665)
P2	520	F	S	S::99.49(143321)
P2	521	F	H	H::99.69(144076)
P2	522	F	L	L::99.94(143629)
P2	523	F	P	P::99.78(144631)
P2	524	F	D	D::98.64(143555)
P2	525	F	R	R::99.55(144193)
P2	526	F	V	V::99.62(144814)
P2	527	F	H	H::99.73(144675)
P2	529	F	A	A::99.01(142461)
P2	530	F	S	S::99.93(142910)
P2	531	F	P	P::99.93(144072)
P2	532	F	L	L::99.93(144293)
P2	533	F	H	H::99.81(167373)
P2	534	F	V	V::99.94(273548)

P2	535	F	A	A::99.68(296117)
P2	536	F	W	W::99.64(310778)
P2	537	F	R	R::99.60(329632)
P2	538	F	P	P::99.79(332118)
S2	1	F	S	S::100.00(14441)
S2	2	F	T	T::99.99(14926)
S2	3	F	T	T::99.99(16055)
S2	5	F	H	H::99.29(16888)
S2	6	F	Q	Q::99.31(17560)
S2	7	F	A	A::99.02(17959)
S2	8	F	L	L::99.92(18557)
S2	9	F	Q	Q::99.71(19426)
S2	10	F	D	D::99.01(20235)
S2	11	F	P	P::99.50(21389)
S2	12	F	R	R::96.20(21686)
S2	13	F	V	V::99.94(23062)
S2	14	F	R	R::92.20(22045) K::7.18(1718)
S2	15	F	G	G::99.54(24852)
S2	16	F	L	L::99.82(25500)
S2	17	F	Y	Y::99.70(26302)
S2	19	F	P	P::99.99(115140)
S2	20	F	A	A::99.82(119815)
S2	21	F	G	G::99.91(125459)
S2	22	F	G	G::99.72(129109)
S2	23	F	S	S::99.87(131812)
S2	24	F	S	S::99.81(137832)
S2	25	F	S	S::99.78(140915)
S2	26	F	G	G::99.81(147810)
S2	27	F	T	T::99.91(152799)
S2	28	F	V	V::99.83(156964)
S2	29	F	N	N::73.89(118574) H::25.84(41467)
S2	30	F	P	P::99.84(166823)
S2	31	F	V	V::99.88(171986)
S2	32	F	P	P::99.82(177429)
S2	33	F	T	T::99.67(182882)
S2	34	F	T	T::99.81(188637)
S2	35	F	A	A::99.44(192024)
S2	36	F	S	S::99.84(196600)
S2	37	F	L	L::99.68(202384)
S2	38	F	I	I::99.92(207087)
S2	39	F	S	S::99.61(208017)
S2	40	F	S	S::99.79(215799)
S2	41	F	I	I::99.70(220479)
S2	43	F	S	S::99.72(224985)
S2	44	F	R	R::99.30(234252)
S2	45	F	I	I::99.73(238442)
S2	46	F	G	G::99.76(239818)
S2	47	F	D	D::99.73(239596)
S2	48	F	P	P::99.56(239814)
S2	49	F	A	A::99.24(239869)
S2	50	F	P	P::99.74(241414)

S2	51	F	N	N::85.90(209192) S::14.00(34090)
S2	52	F	M	M::97.84(242562)
S2	53	F	E	E::98.73(242586)
S2	54	F	S	S::77.85(192245) N::21.69(53549)
S2	55	F	I	I::99.83(249863)
S2	56	F	T	T::99.87(252538)
S2	57	F	S	S::99.82(252339)
S2	58	F	G	G::62.21(157433) R::36.83(93205)
S2	60	F	L	L::99.89(257031)
S2	61	F	G	G::99.04(258911)
S2	62	F	P	P::99.82(264427)
S2	63	F	L	L::99.90(265212)
S2	64	F	L	L::99.80(267626)
S2	65	F	V	V::99.69(271511)
S2	66	F	L	L::99.84(272902)
S2	67	F	Q	Q::85.35(234518) P::14.43(39660)
S2	68	F	A	A::99.81(278039)
S2	69	F	G	G::99.79(281912)
S2	71	F	F	F::92.82(267062) S::7.12(20478)
S2	72	F	L	L::99.83(289480)
S2	73	F	L	L::99.87(293812)
S2	74	F	T	T::99.86(295077)
S2	75	F	K	K::99.93(297555)
S2	76	F	I	I::99.91(301968)
S2	77	F	L	L::99.77(302973)
S2	78	F	T	T::99.80(304036)
S2	79	F	I	I::99.87(309483)
S2	80	F	P	P::99.81(294039)
S2	81	F	Q	Q::72.43(222064) P::27.26(83575)
S2	82	F	S	S::99.70(317706)
S2	83	F	L	L::99.88(316644)
S2	84	F	D	D::99.70(322124)
S2	85	F	S	S::99.82(320896)
S2	86	F	W	W::99.62(324243)
S2	87	F	W	W::98.26(322191)
S2	88	F	T	T::99.86(329635)
S2	89	F	S	S::99.79(327690)
S2	90	F	L	L::99.90(329917)
S2	91	F	N	N::99.79(333596)
S2	93	F	L	L::99.88(332286)
S2	94	F	G	G::99.46(337579)
S2	95	F	G	G::90.61(304838) E::8.49(28553)
S2	96	F	A	A::99.22(338561)
S2	97	F	P	P::99.89(346275)
S2	98	F	V	V::99.64(346593)
S2	99	F	C	C::99.72(349536)
S2	100	F	L	L::37.87(130044) R::35.31(121250) P::26.57(91227)
S2	101	F	G	G::99.50(353822)
S2	102	F	Q	Q::99.74(355512)
S2	103	F	N	N::99.68(360716)
S2	104	F	S	S::99.78(358393)

S2	105	F	Q	Q::99.75(362581)
S2	106	F	S	S::99.74(362446)
S2	107	F	P	P::94.39(341225) L::5.44(19675)
S2	108	F	T	T::99.67(368521)
S2	109	F	S	S::99.81(374327)
S2	110	F	S	S::99.19(358939)
S2	111	F	H	H::99.88(381499)
S2	112	F	S	S::98.51(373873)
S2	113	F	P	P::66.55(251802) L::33.37(126275)
S2	114	F	T	T::99.60(389906)
S2	115	F	S	S::99.87(391360)
S2	116	F	C	C::99.66(391172)
S2	117	F	P	P::99.70(400511)
S2	118	F	P	P::98.48(393572)
S2	119	F	I	I::99.81(407896)
S2	120	F	C	C::98.11(399004)
S2	121	F	P	P::99.83(410646)
S2	122	F	G	G::99.33(411485)
S2	123	F	Y	Y::99.74(415366)
S2	124	F	R	R::99.38(415768)
S2	125	F	W	W::98.98(416672)
S2	126	F	M	M::99.71(422431)
S2	127	F	C	C::78.54(330194) *:21.24(89297)
S2	128	F	L	L::99.92(422646)
S2	129	F	R	R::99.45(420565)
S2	130	F	R	R::98.28(414730)
S2	132	F	I	I::99.90(428005)
S2	133	F	I	I::99.89(427190)
S2	135	F	L	L::99.82(429473)
S2	137	F	I	I::99.86(434059)
S2	138	F	L	L::99.76(432005)
S2	139	F	L	L::99.54(433354)
S2	140	F	L	L::99.82(433634)
S2	141	F	C	C::99.73(434580)
S2	142	F	L	L::99.70(438337)
S2	143	F	I	I::99.91(435546)
S2	145	F	L	L::99.83(430554)
S2	146	F	L	L::99.76(439557)
S2	147	F	V	V::99.71(438677)
S2	148	F	L	L::99.90(434560)
S2	149	F	L	L::99.81(428118)
S2	150	F	D	D::99.77(430994)
S2	151	F	Y	Y::99.83(429170)
S2	152	F	Q	Q::99.62(426090)
S2	153	F	G	G::99.76(427295)
S2	154	F	M	M::99.65(424607)
S2	155	F	L	L::99.79(421592)
S2	156	F	P	P::99.80(421489)
S2	157	F	V	V::99.65(419628)
S2	158	F	C	C::99.80(411738)
S2	159	F	P	P::99.86(411384)

S2	160	F	L	L::46.25(184246) Q::23.96(95470) P::23.65(94213) H::6.07(24175)
S2	161	F	I	I::99.74(407461)
S2	162	F	P	P::99.72(402398)
S2	163	F	G	G::98.52(395411)
S2	164	F	S	S::99.68(397555)
S2	165	F	S	S::99.51(390284)
S2	166	F	T	T::99.74(389417)
S2	167	F	T	T::99.61(384168)
S2	168	F	S	S::99.60(381125)
S2	169	F	T	T::98.88(374810)
S2	170	F	G	G::99.12(372096)
S2	171	F	P	P::99.74(371980)
S2	172	F	C	C::99.29(365212)
S2	173	F	R	R::99.48(360090)
S2	174	F	T	T::99.66(362382)
S2	175	F	C	C::99.04(355971)
S2	176	F	T	T::99.83(356565)
S2	177	F	T	T::99.73(356609)
S2	178	F	L	L::91.71(327405) R::8.14(29048)
S2	179	F	A	A::98.36(351765)
S2	180	F	Q	Q::99.54(353062)
S2	181	F	G	G::97.90(343828)
S2	182	F	T	T::91.62(320336) I::8.20(28675)
S2	183	F	S	S::99.78(343892)
S2	184	F	M	M::99.13(338321)
S2	185	F	K	K::57.36(180986) F::42.35(133625)
S2	186	F	H	H::57.62(181072) P::42.23(132722)
S2	187	F	S	S::99.76(345656)
S2	188	F	C	C::99.56(352693)
S2	189	F	C	C::98.83(356938)
S2	190	F	C	C::99.61(358600)
S2	191	F	S	S::99.72(357222)
S2	192	F	K	K::99.81(362566)
S2	193	F	P	P::99.42(362803)
S2	194	F	S	S::99.55(358866)
S2	195	F	D	D::99.58(362171)
S2	196	F	G	G::97.48(356074)
S2	197	F	N	N::99.81(373291)
S2	198	F	C	C::99.25(369539)
S2	199	F	T	T::99.87(377697)
S2	200	F	C	C::99.39(375635)
S2	201	F	I	I::99.91(382219)
S2	202	F	P	P::99.79(381178)
S2	203	F	I	I::99.83(386629)
S2	204	F	P	P::99.78(389244)
S2	205	F	S	S::97.80(383932)
S2	206	F	S	S::99.57(394234)
S2	207	F	W	W::99.49(395473)
S2	208	F	A	A::99.32(397002)
S2	210	F	G	G::98.26(395630)
S2	211	F	K	K::99.85(407304)

S2	213	F	L	L::99.69(411203)
S2	214	F	W	W::99.16(414378)
S2	215	F	E	E::99.40(425466)
S2	216	F	W	W::96.78(418904)
S2	217	F	A	A::99.80(442495)
S2	218	F	S	S::99.79(442306)
S2	219	F	A	A::99.79(452876)
S2	220	F	R	R::99.74(461319)
S2	222	F	S	S::97.96(463979)
S2	223	F	W	W::98.63(480306)
S2	224	F	L	L::99.72(495955)
S2	225	F	S	S::99.46(504593)
S2	226	F	L	L::99.79(510474)
S2	227	F	L	L::99.85(513187)
S2	228	F	V	V::99.87(523171)
S2	229	F	P	P::99.82(522972)
S2	231	F	V	V::99.57(531433)
S2	232	F	Q	Q::99.85(533214)
S2	233	F	W	W::98.22(525887)
S2	235	F	V	V::99.77(519198)
S2	236	F	G	G::99.14(543767)
S2	237	F	L	L::99.87(551343)
S2	238	F	S	S::99.77(549041)
S2	239	F	P	P::99.83(553716)
S2	240	F	T	T::99.63(553994)
S2	241	F	V	V::99.83(559894)
S2	242	F	W	W::99.11(555740)
S2	243	F	L	L::99.82(568962)
S2	244	F	S	S::99.75(565725)
S2	245	F	V	V::99.68(572914)
S2	246	F	I	I::99.85(565015)
S2	247	F	W	W::98.74(560286)
S2	248	F	M	M::99.47(564385)
S2	249	F	M	M::99.78(563518)
S2	250	F	W	W::99.38(559554)
S2	251	F	Y	Y::99.73(561578)
S2	252	F	W	W::99.59(558680)
S2	253	F	G	G::99.77(553815)
S2	254	F	P	P::99.70(543202)
S2	255	F	S	S::90.97(496623) G::8.67(47355)
S2	256	F	L	L::99.92(541422)
S2	257	F	Y	Y::99.72(540604)
S2	258	F	N	N::99.67(539932)
S2	259	F	I	I::99.92(534346)
S2	260	F	L	L::99.76(525033)
S2	261	F	S	S::99.03(523032)
S2	262	F	P	P::99.88(525338)
S2	264	F	I	I::99.72(511676)
S2	265	F	P	P::99.78(501688)
S2	266	F	L	L::99.90(498533)
S2	267	F	L	L::97.90(485601)

S2	268	F	P	P::99.89(490684)
S2	269	F	I	I::99.94(489790)
S2	272	F	C	C::99.61(456741)
S2	273	F	L	L::99.35(451197)
S2	274	F	W	W::99.32(442756)
S2	275	F	V	V::99.34(431316)
S2	276	F	Y	Y::99.86(429291)
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X	1	F	M	M::98.85(228919)
X	2	F	A	A::99.40(227901)
X	3	F	A	A::98.89(223582)
X	4	F	R	R::99.35(220855)
X	5	F	L	L::99.83(218813)
X	6	F	C	C::98.30(213226)
X	7	F	C	C::99.53(214089)
X	8	F	Q	Q::99.64(213103)
X	9	F	L	L::99.95(212894)
X	10	F	D	D::99.28(210559)
X	11	F	P	P::99.92(208797)
X	12	F	A	A::98.97(201357)
X	13	F	R	R::99.66(202267)
X	14	F	D	D::99.74(200487)
X	15	F	V	V::99.69(200912)
X	16	F	L	L::99.85(199401)
X	17	F	C	C::99.50(195568)
X	18	F	L	L::99.93(195381)
X	19	F	R	R::99.84(194531)
X	20	F	P	P::99.91(191940)
X	21	F	V	V::99.79(188489)
X	22	F	S	S::99.43(184796)
X	23	F	A	A::99.42(182474)
X	24	F	E	E::98.35(178123)
X	25	F	S	S::99.90(180127)
X	26	F	C	C::99.57(177044)
X	27	F	G	G::98.95(175162)
X	28	F	R	R::99.62(174666)
X	29	F	P	P::99.90(175003)
X	30	F	V	V::99.62(173472)
X	31	F	S	S::99.81(169019)
X	32	F	G	G::99.78(164993)
X	33	F	S	S::99.84(161347)
X	34	F	L	L::99.65(159980)
X	35	F	G	G::99.29(157918)
X	36	F	D	D::97.02(153819)
X	37	F	L	L::94.52(147641) V::5.21(8140)
X	38	F	S	S::99.65(155673)
X	39	F	S	S::99.78(156864)
X	40	F	P	P::99.88(156208)
X	41	F	S	S::99.64(152273)
X	42	F	P	P::99.23(151358)
X	43	F	S	S::99.93(151063)
X	44	F	A	A::99.48(148401)

X	45	F	V	V::99.46(148215)
X	46	F	P	P::99.87(146047)
X	47	F	A	A::99.71(145140)
X	48	F	D	D::97.44(141584)
X	49	F	H	H::99.87(144166)
X	50	F	G	G::99.84(143099)
X	51	F	A	A::99.82(142825)
X	52	F	H	H::99.79(142657)
X	53	F	L	L::99.90(143344)
X	54	F	S	S::99.94(143008)
X	55	F	L	L::99.90(142500)
X	56	F	R	R::99.79(143611)
X	57	F	G	G::99.60(143170)
X	58	F	L	L::99.77(141801)
X	59	F	P	P::99.70(141796)
X	60	F	V	V::99.75(144220)
X	61	F	C	C::97.20(138356)
X	62	F	T	T::60.04(84019) A::38.38(53704)
X	64	F	S	S::99.84(142991)
X	65	F	S	S::99.95(143789)
X	66	F	A	A::99.60(144529)
X	67	F	G	G::98.47(142592)
X	68	F	P	P::99.77(144904)
X	69	F	C	C::99.58(144176)
X	70	F	A	A::99.15(143464)
X	71	F	L	L::99.94(144032)
X	72	F	R	R::98.99(141999)
X	74	F	T	T::99.50(143042)
X	75	F	S	S::99.93(144377)
X	76	F	A	A::99.48(146176)
X	77	F	R	R::99.82(230459)
X	78	F	R	R::99.54(291671)
X	79	F	M	M::99.63(299693)
X	80	F	E	E::99.82(329718)
X	81	F	T	T::99.84(332419)
X	82	F	T	T::99.88(333831)
X	83	F	V	V::99.72(335193)
X	84	F	N	N::99.62(335065)
X	85	F	A	A::99.73(334749)
X	86	F	H	H::99.76(336292)
X	87	F	Q	Q::99.80(335541)
X	88	F	I	I::93.89(311232) L::5.87(19467)
X	89	F	L	L::99.92(336447)
X	90	F	P	P::99.75(338091)
X	91	F	K	K::99.80(339417)
X	92	F	V	V::99.85(340073)
X	93	F	L	L::99.90(338825)
X	94	F	H	H::99.50(339585)
X	95	F	K	K::99.88(341102)
X	96	F	R	R::99.41(341020)
X	97	F	T	T::99.92(352297)

X	98	F	L	L::99.84(352125)
X	99	F	G	G::99.06(367463)
X	100	F	L	L::99.91(381718)
X	101	F	S	S::99.68(380771)
X	102	F	A	A::99.08(420808)
X	103	F	M	M::99.74(430886)
X	104	F	S	S::99.79(430955)
X	105	F	T	T::99.76(433052)
X	106	F	T	T::99.67(439871)
X	107	F	D	D::99.60(441008)
X	108	F	L	L::99.84(441813)
X	109	F	E	E::99.76(441302)
X	110	F	A	A::99.42(436807)
X	111	F	Y	Y::99.60(438703)
X	113	F	K	K::99.66(436920)
X	114	F	D	D::99.26(435487)
X	115	F	C	C::98.94(431774)
X	116	F	L	L::99.81(434038)
X	118	F	K	K::99.69(426968)
X	119	F	D	D::99.27(423922)
X	120	F	W	W::98.40(416349)
X	121	F	E	E::99.68(417825)
X	122	F	E	E::99.45(413939)
X	123	F	S	S::99.64(405298)
X	124	F	G	G::99.54(407081)
X	125	F	E	E::99.51(397440)
X	126	F	E	E::99.45(276008)
X	127	F	I	I::98.89(206025)
X	128	F	R	R::98.66(197203)
X	129	F	L	L::90.37(166986) *:9.14(16891)
X	130	F	K	M::47.74(86168) N::40.88(73780) *:9.32(16828)
X	131	F	F	I::48.74(87975) Y::40.78(73599) F::9.32(16826)
X	133	F	V	V::99.50(244253)
X	134	F	L	L::99.92(246704)
X	135	F	G	G::98.57(245832)
X	136	F	G	G::99.30(252148)
X	137	F	C	C::99.25(257627)
X	138	F	R	R::99.52(263009)
X	139	F	H	H::99.84(267356)
X	140	F	K	K::99.91(270309)
X	141	F	L	L::99.79(272825)
X	142	F	V	V::99.66(277062)
X	143	F	C	C::99.67(277407)
X	144	F	A	A::99.67(282742)
X	145	F	P	P::99.85(281601)
X	146	F	A	A::99.60(265590)
X	147	F	P	P::99.73(237605)
X	148	F	C	C::99.50(223929)
X	149	F	N	N::99.76(216718)
X	152	F	T	T::99.63(211561)
X	153	F	S	S::99.87(218012)

C	1	F	M	M::99.74(320160)
C	2	F	D	D::99.79(325401)
C	3	F	I	I::99.88(326556)
C	4	F	D	D::99.52(326326)
C	5	F	P	P::99.68(331265)
C	6	F	Y	Y::99.86(330597)
C	7	F	K	K::99.93(334563)
C	8	F	E	E::99.02(336430)
C	10	F	G	G::99.36(335908)
C	11	F	A	A::99.64(336264)
C	12	F	T	T::99.82(335173)
C	13	F	V	V::98.99(331389)
C	14	F	E	E::99.39(330230)
C	15	F	L	L::99.79(325647)
C	16	F	L	L::99.86(324286)
C	17	F	S	S::99.83(318728)
C	19	F	L	L::99.93(314280)
C	20	F	P	P::99.67(311907)
C	21	F	S	S::99.65(308117)
C	22	F	D	D::99.67(305290)
C	25	F	P	P::99.46(291796)
C	26	F	S	S::99.47(282284)
C	27	F	V	V::99.31(273352)
C	28	F	R	R::99.86(264887)
C	29	F	D	D::99.64(262426)
C	30	F	L	L::99.53(258799)
C	31	F	L	L::69.75(172322) Q::30.16(74509)
C	32	F	D	D::99.85(177847)
C	33	F	T	T::99.76(170296)
C	34	F	A	A::99.68(224086)
C	35	F	S	S::99.55(220164)
C	36	F	A	A::99.75(219519)
C	37	F	L	L::99.95(215495)
C	38	F	Y	Y::99.40(159640)
C	39	F	R	R::99.47(157200)
C	40	F	D	D::99.13(155183)
C	41	F	A	A::99.77(150114)
C	42	F	L	L::99.82(147713)
C	43	F	E	E::99.44(150795)
C	44	F	S	S::99.89(150465)
C	45	F	P	P::99.77(149954)
C	46	F	E	E::99.74(148142)
C	47	F	H	H::99.65(149148)
C	48	F	C	C::98.36(142067)
C	49	F	S	S::99.07(144763)
C	50	F	P	P::99.68(146974)
C	51	F	H	H::99.84(187484)
C	52	F	H	H::99.85(187501)
C	53	F	T	T::99.74(187331)
C	54	F	A	A::99.59(186741)
C	55	F	L	L::99.87(185893)

C	56	F	R	R::99.87(184596)
C	57	F	Q	Q::99.90(182990)
C	58	F	A	A::99.81(184342)
C	59	F	I	I::99.43(184177)
C	60	F	L	L::75.65(137311) F::24.24(43999)
C	61	F	C	C::99.60(182048)
C	62	F	W	W::99.66(183427)
C	63	F	G	G::99.20(174509)
C	64	F	E	E::63.98(114578) D::32.80(58732)
C	65	F	L	L::99.91(181902)
C	66	F	M	M::77.66(140436) I::22.12(39991)
C	67	F	T	T::68.75(123965) N::31.13(56138)
C	68	F	L	L::99.94(187520)
C	69	F	A	A::99.40(191973)
C	70	F	T	T::99.76(193994)
C	71	F	W	W::98.93(192842)
C	72	F	V	V::99.80(195396)
C	73	F	G	G::99.73(194423)
C	74	F	V	V::74.75(145341) A::24.09(46838)
C	75	F	N	N::56.71(111863) S::42.98(84783)
C	76	F	L	L::99.83(200327)
C	77	F	E	E::99.30(199463)
C	78	F	D	D::99.52(168724)
C	79	F	P	P::99.51(170189)
C	80	F	A	A::99.17(170176)
C	81	F	S	S::98.82(171838)
C	82	F	R	R::99.72(175586)
C	83	F	D	D::99.39(179088)
C	84	F	L	L::99.81(180376)
C	85	F	V	V::99.26(179336)
C	86	F	V	V::99.49(171767)
C	87	F	S	S::68.75(152257) G::30.51(67576)
C	88	F	Y	Y::99.76(232933)
C	89	F	V	V::99.77(239127)
C	90	F	N	N::99.76(242585)
C	91	F	T	T::99.79(245438)
C	92	F	N	N::68.78(167617) T::30.09(73343)
C	93	F	M	M::49.94(122042) V::31.81(77741) T::10.79(26370)
C	94	F	G	G::99.52(255601)
C	95	F	L	L::99.90(260508)
C	96	F	K	K::99.21(266582)
C	98	F	R	R::99.59(273849)
C	99	F	Q	Q::93.81(261406) *:5.97(16642)
C	100	F	L	L::98.52(278380)
C	101	F	L	L::99.88(287119)
C	102	F	W	W::99.63(291913)
C	104	F	H	H::99.55(305209)
C	105	F	I	I::99.67(312194)
C	106	F	S	S::99.39(312611)
C	107	F	C	C::99.74(314124)
C	108	F	L	L::99.65(318512)

C	109	F	T	T::99.22(324175)
C	111	F	G	G::98.78(325383)
C	112	F	R	R::99.45(331025)
C	113	F	E	E::98.66(332411)
C	114	F	T	T::99.50(337346)
C	115	F	V	V::98.94(337097)
C	116	F	I	I::99.31(338153)
C	117	F	E	E::99.15(340585)
C	118	F	Y	Y::99.44(341999)
C	119	F	L	L::99.76(341813)
C	120	F	V	V::99.77(341391)
C	121	F	S	S::99.76(342086)
C	123	F	G	G::99.79(344431)
C	124	F	V	V::99.85(345201)
C	125	F	W	W::98.95(340893)
C	126	F	I	I::99.80(346625)
C	127	F	R	R::98.95(342488)
C	128	F	T	T::99.90(348754)
C	129	F	P	P::99.92(349156)
C	130	F	P	P::69.23(238482) Q::30.63(105513)
C	131	F	A	A::99.45(347240)
C	132	F	Y	Y::99.56(343101)
C	133	F	R	R::99.63(341267)
C	134	F	P	P::99.65(338551)
C	135	F	P	P::99.82(336485)
C	136	F	N	N::99.94(335331)
C	137	F	A	A::99.75(334152)
C	138	F	P	P::99.79(338547)
C	139	F	I	I::99.89(337050)
C	140	F	L	L::99.88(333543)
C	141	F	S	S::99.84(334475)
C	142	F	T	T::99.69(333133)
C	143	F	L	L::62.30(202977) T::35.73(116406)
C	144	F	P	P::99.81(331944)
C	145	F	E	E::99.48(331357)
C	146	F	N	N::99.74(337351)
C	147	F	T	T::99.76(338043)
C	148	F	V	V::99.60(338182)
C	149	F	V	V::99.61(336391)
C	150	F	R	R::99.39(331220)
C	151	F	R	R::99.11(325694)
C	152	F	R	R::99.80(331700)
C	153	F	G	G::99.56(331704)
C	154	F	R	R::99.74(329827)
C	155	F	S	S::98.84(326481)
C	156	F	P	P::99.70(329684)
C	157	F	R	R::98.80(323280)
C	158	F	R	R::99.32(324907)
C	159	F	R	R::99.34(328496)
C	160	F	T	T::99.90(331573)
C	161	F	P	P::99.74(332960)

C	162	F	S	S::99.82(330065)
C	163	F	P	P::99.91(333147)
C	164	F	R	R::99.57(331286)
C	165	F	R	R::99.71(331744)
C	166	F	R	R::99.35(323064)
C	167	F	R	R::99.14(327159)
C	168	F	S	S::75.19(246088) F::24.62(80593)
C	169	F	Q	Q::99.85(330022)
C	170	F	S	S::99.87(328447)
C	171	F	P	P::99.86(327320)
C	172	F	R	R::99.83(325268)
C	173	F	R	R::99.49(324744)
C	174	F	R	R::99.13(319874)
C	175	F	R	R::99.78(322879)
C	176	F	S	S::99.84(321914)
C	177	F	Q	Q::99.81(320312)
C	178	F	S	S::97.00(308737)
C	179	F	P	P::99.79(317482)
C	180	F	A	A::99.53(316767)
C	181	F	S	S::99.41(312420)
C	182	F	Q	Q::99.58(314360)
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P1	1	F	M	M::99.84(334387)
P1	2	F	P	P::99.81(335401)
P1	3	F	L	L::99.92(337905)
P1	4	F	S	S::99.93(336715)
P1	5	F	Y	Y::99.90(336631)
P1	6	F	Q	Q::99.71(334769)
P1	7	F	H	H::64.10(209173) Q::35.72(116561)
P1	8	F	F	F::62.23(201982) L::37.71(122393)
P1	9	F	R	R::98.92(328568)
P1	10	F	R	R::99.28(331939)
P1	11	F	I	I::99.85(337264)
P1	12	F	L	L::99.91(337655)
P1	13	F	L	L::99.87(338256)
P1	14	F	L	L::99.91(331368)
P1	15	F	D	D::99.57(332603)
P1	16	F	E	E::98.85(326042)
P1	17	F	E	E::99.74(332596)
P1	18	F	A	A::99.58(328195)
P1	19	F	G	G::99.86(331340)
P1	20	F	P	P::99.85(330214)
P1	21	F	L	L::99.83(323080)
P1	22	F	E	E::99.50(322182)
P1	23	F	E	E::99.34(324399)
P1	24	F	E	E::99.33(328677)
P1	25	F	L	L::99.89(331211)
P1	26	F	P	P::99.91(334030)
P1	27	F	R	R::99.74(331461)
P1	28	F	L	L::99.92(332950)
P1	29	F	A	A::99.57(328385)
P1	30	F	D	D::99.78(332733)

P1	31	F	E	E::99.40(325134)
P1	32	F	D	D::99.06(326913)
P1	33	F	L	L::75.20(245991) F::24.71(80822)
P1	34	F	N	N::99.92(331328)
P1	35	F	R	R::99.60(328963)
P1	36	F	R	R::99.81(326552)
P1	37	F	V	V::99.91(327420)
P1	38	F	A	A::99.60(319286)
P1	39	F	E	E::99.76(320750)
P1	40	F	D	D::99.70(322413)
P1	41	F	L	L::99.88(321298)
P1	42	F	N	N::99.82(320830)
P1	43	F	L	L::97.03(308558)
P1	44	F	Q	Q::99.48(316404)
P1	45	F	L	L::99.91(316881)
P1	46	F	P	P::99.35(315318)
P1	47	F	N	N::99.82(316318)
P1	48	F	V	V::99.77(311669)
P1	49	F	S	S::98.82(306448)
P1	50	F	I	I::99.93(309676)
P1	51	F	P	P::99.88(291949)
P1	52	F	W	W::99.00(297998)
P1	53	F	T	T::99.92(304288)
P1	54	F	H	H::99.85(303744)
P1	55	F	K	K::99.86(302910)
P1	56	F	V	V::99.87(299941)
P1	57	F	G	G::98.78(293615)
P1	58	F	N	N::99.92(300615)
P1	60	F	T	T::99.79(295115)
P1	61	F	G	G::99.61(290784)
P1	62	F	L	L::99.93(290975)
P1	63	F	Y	Y::99.86(289801)
P1	64	F	S	S::99.93(289286)
P1	65	F	S	S::99.95(286547)
P1	66	F	T	T::99.77(287531)
P1	67	F	I	I::99.75(284846)
P1	68	F	P	P::99.87(283996)
P1	69	F	V	V::99.72(281107)
P1	71	F	N	N::99.93(279898)
P1	72	F	P	P::99.72(277245)
P1	73	F	N	N::99.86(275679)
P1	74	F	W	W::99.28(271805)
P1	75	F	K	K::99.84(270598)
P1	76	F	T	T::99.80(271314)
P1	77	F	P	P::99.87(269350)
P1	78	F	S	S::99.86(267412)
P1	80	F	P	P::99.94(268050)
P1	81	F	D	D::99.36(265754)
P1	82	F	I	I::99.89(269535)
P1	83	F	H	H::99.88(270205)
P1	84	F	L	L::99.89(268968)

P1	85	F	H	H::99.82(270637)
P1	86	F	Q	Q::99.79(269007)
P1	87	F	D	D::99.64(268578)
P1	88	F	I	I::99.89(269284)
P1	89	F	I	I::99.88(267738)
P1	90	F	N	N::99.73(268208)
P1	91	F	K	K::99.82(268526)
P1	92	F	C	C::99.84(268041)
P1	93	F	E	E::99.43(265949)
P1	94	F	Q	Q::99.86(267595)
P1	96	F	V	V::99.80(265383)
P1	97	F	G	G::99.67(266526)
P1	98	F	P	P::99.91(266258)
P1	99	F	L	L::99.90(263618)
P1	100	F	T	T::99.84(265181)
P1	101	F	V	V::99.70(262174)
P1	102	F	N	N::99.92(264632)
P1	103	F	E	E::99.41(260312)
P1	104	F	K	K::99.90(263115)
P1	105	F	R	R::99.27(255989)
P1	106	F	R	R::99.58(257406)
P1	107	F	L	L::99.92(256785)
P1	108	F	N	N::99.48(254790)
P1	109	F	L	L::99.89(252542)
P1	110	F	V	V::99.81(252652)
P1	111	F	M	M::99.77(251573)
P1	112	F	P	P::99.89(249318)
P1	113	F	A	A::99.56(247332)
P1	114	F	R	R::99.62(243675)
P1	117	F	P	P::99.75(239847)
P1	118	F	I	I::99.84(238912)
P1	119	F	S	S::99.89(235373)
P1	120	F	T	T::99.90(236174)
P1	121	F	K	K::99.91(235578)
P1	122	F	Y	Y::99.89(233969)
P1	123	F	L	L::99.88(230072)
P1	124	F	P	P::99.84(228931)
P1	125	F	L	L::99.87(224547)
P1	126	F	E	E::99.54(222386)
P1	127	F	K	K::99.87(222973)
P1	128	F	G	G::99.72(222208)
P1	129	F	I	I::99.92(220494)
P1	130	F	K	K::99.89(218568)
P1	131	F	P	P::99.84(217146)
P1	132	F	Y	Y::99.90(213088)
P1	133	F	Y	Y::99.91(211519)
P1	134	F	P	P::99.84(209000)
P1	135	F	D	D::99.29(207071)
P1	136	F	N	N::99.84(209133)
P1	137	F	V	V::99.69(206045)
P1	138	F	V	V::80.51(164159) I::19.40(39563)

P1	139	F	N	N::99.04(202371)
P1	140	F	H	H::99.87(202776)
P1	141	F	Y	Y::99.91(199584)
P1	143	F	Q	Q::99.73(195663)
P1	144	F	T	T::99.91(193904)
P1	145	F	R	R::99.46(190986)
P1	146	F	H	H::99.87(190511)
P1	147	F	Y	Y::99.91(188824)
P1	148	F	L	L::99.90(187136)
P1	149	F	H	H::99.84(185613)
P1	150	F	T	T::99.91(184355)
P1	151	F	L	L::99.90(181524)
P1	152	F	W	W::98.88(178194)
P1	153	F	K	K::99.87(179094)
P1	154	F	A	A::99.76(176579)
P1	155	F	G	G::99.43(174861)
P1	156	F	I	I::99.92(174997)
P1	157	F	L	L::99.90(172473)
P1	158	F	Y	Y::99.91(172675)
P1	159	F	K	K::99.90(170395)
P1	160	F	R	R::99.59(168881)
P1	161	F	E	E::99.65(162301)
P1	162	F	T	T::99.85(167061)
P1	163	F	T	T::99.80(167082)
P1	164	F	R	R::99.76(166290)
P1	165	F	S	S::99.78(164922)
P1	166	F	A	A::99.84(164328)
P1	167	F	S	S::99.84(163033)
P1	169	F	C	C::99.64(159947)
P1	170	F	G	G::99.16(158696)
P1	171	F	S	S::99.75(157719)
P1	172	F	P	P::99.87(159324)
P1	173	F	Y	Y::99.91(157231)
P1	174	F	S	S::99.92(156842)
P1	175	F	W	W::98.79(153369)
P1	176	F	E	E::99.29(154311)
P1	177	F	Q	Q::99.82(152105)
P1	178	F	E	E::99.64(151772)
P1	179	F	L	L::99.69(150774)
P1	180	F	H	H::99.88(150791)
P1	181	F	H	H::99.83(149377)
P1	182	F	G	G::99.47(147887)
P1	183	F	A	A::98.99(145107)
P1	185	F	L	L::99.61(142121)
P1	186	F	D	D::99.74(142613)
P1	187	F	G	G::99.52(140957)
P1	188	F	P	P::99.86(140654)
P1	189	F	S	S::99.89(138780)
P1	190	F	R	R::99.52(137217)
P1	191	F	M	M::99.65(138882)
P1	192	F	G	G::99.38(138003)

P1	193	F	E	E::98.81(135577)
P1	194	F	E	E::98.71(136573)
P1	195	F	S	S::99.81(137605)
P1	197	F	H	H::99.77(136750)
P1	198	F	H	H::99.83(137498)
P1	199	F	Q	Q::93.80(128112) H::5.99(8179)
P1	200	F	S	S::99.86(136250)
P1	201	F	S	S::99.84(135623)
P1	202	F	G	G::99.49(135356)
P1	203	F	I	I::99.26(133995)
P1	205	F	S	S::99.59(132313)
P1	206	F	R	R::99.62(132134)
P1	207	F	P	P::99.70(133082)
P1	208	F	P	P::99.78(132869)
P1	209	F	V	V::99.87(133290)
P1	210	F	G	G::99.58(133094)
P1	211	F	S	S::99.80(133171)
P1	212	F	S	S::99.48(132764)
P1	213	F	I	I::99.81(133142)
P1	214	F	Q	Q::99.72(131794)
P1	215	F	S	S::99.51(131934)
P1	216	F	K	K::99.77(131315)
P1	217	F	H	H::99.78(130826)
P1	218	F	Q	Q::99.72(130378)
P1	219	F	K	K::99.72(130820)
P1	220	F	S	S::99.75(131260)
P1	221	F	R	R::99.60(131272)
P1	222	F	L	L::99.73(131801)
P1	223	F	G	G::99.52(131006)
P1	224	F	P	P::99.62(130802)
P1	225	F	Q	Q::99.74(131250)
P1	226	F	S	S::99.78(130975)
P1	227	F	Q	Q::99.79(130744)
P1	228	F	Q	Q::99.81(129378)
P1	229	F	R	R::99.34(129958)
P1	230	F	P	P::99.61(130363)
P1	231	F	L	L::99.59(129715)
P1	232	F	D	D::73.21(94149) V::26.37(33912)
P1	233	F	R	R::99.43(128375)
P1	234	F	S	S::99.78(130253)
P1	235	F	Q	Q::99.79(129927)
P1	236	F	Q	Q::99.83(129296)
P1	237	F	G	G::99.55(129094)
P1	238	F	R	R::99.29(128611)
P1	239	F	S	S::99.74(128546)
P1	240	F	G	G::99.13(126922)
P1	241	F	S	S::99.21(125645)
P1	242	F	I	I::99.68(127560)
P1	243	F	R	R::99.48(125753)
P1	244	F	A	A::99.84(125845)
P1	245	F	W	W::98.98(119536)

P1	246	F	V	V::79.12(99329) G::20.21(25374)
P1	247	F	H	H::99.38(127986)
P1	248	F	S	S::99.70(127983)
P1	249	F	P	P::99.78(129102)
P1	250	F	T	T::99.66(129024)
P1	251	F	R	R::99.33(129049)
P1	252	F	R	R::99.68(130319)
P1	253	F	P	P::99.70(131414)
P1	255	F	G	G::99.71(132635)
P1	256	F	V	V::99.31(131762)
P1	257	F	E	E::99.79(132505)
P1	258	F	P	P::99.71(133902)
P1	259	F	S	S::99.62(133955)
P1	260	F	G	G::99.68(137261)
P1	261	F	S	S::99.83(136934)
P1	262	F	R	R::99.80(141158)
P1	263	F	H	H::99.77(141326)
P1	264	F	A	A::78.82(111791) T::21.10(29923)
P1	265	F	K	K::99.41(143213)
P1	266	F	N	N::99.84(144905)
P1	267	F	I	I::99.70(144599)
P1	268	F	A	A::99.71(142944)
P1	269	F	S	S::99.52(142196)
P1	270	F	R	R::99.18(139166)
P1	271	F	S	S::99.85(140099)
P1	272	F	A	A::99.53(139269)
P1	273	F	S	S::99.88(139088)
P1	274	F	C	C::99.75(137490)
P1	275	F	L	L::99.79(137369)
P1	276	F	H	H::99.81(136455)
P1	277	F	Q	Q::99.81(133764)
P1	278	F	S	S::99.69(131277)
P1	279	F	A	A::99.52(127861)
P1	280	F	V	V::99.87(126825)
P1	281	F	R	R::99.56(123928)
P1	282	F	K	K::99.75(121361)
P1	283	F	A	A::99.60(117332)
P1	284	F	A	A::99.56(115654)
P1	285	F	Y	Y::99.51(111870)
P1	286	F	P	P::99.65(109388)
P1	287	F	N	N::99.76(106714)
P1	288	F	H	H::99.75(104248)
P1	289	F	S	S::99.80(102057)
P1	290	F	T	T::99.83(99495)
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S1	1	F	M	M::99.63(148956)
S1	2	F	G	G::99.48(147074)
S1	3	F	L	L::99.78(145508)
S1	4	F	S	S::99.77(144572)
S1	5	F	W	W::99.26(141281)
S1	6	F	T	T::99.76(141475)
S1	7	F	V	V::99.64(141071)

S1	8	F	P	P::99.89(140324)
S1	9	F	L	L::99.87(138561)
S1	10	F	E	E::99.42(137950)
S1	11	F	W	W::99.48(138075)
S1	12	F	G	G::99.33(137467)
S1	13	F	K	K::99.43(136993)
S1	14	F	N	N::99.75(138799)
S1	15	F	H	H::99.72(137821)
S1	16	F	S	S::99.75(136322)
S1	17	F	T	T::99.79(136922)
S1	18	F	T	T::99.82(137426)
S1	19	F	N	N::93.86(128482) I::6.02(8245)
S1	20	F	P	P::99.76(136110)
S1	21	F	L	L::99.87(135165)
S1	22	F	G	G::99.59(134550)
S1	25	F	P	P::99.56(131960)
S1	26	F	D	D::99.50(132862)
S1	27	F	H	H::99.76(133692)
S1	28	F	Q	Q::99.79(133029)
S1	29	F	L	L::99.78(132749)
S1	30	F	D	D::99.71(133929)
S1	31	F	P	P::99.76(132815)
S1	32	F	A	A::99.58(132036)
S1	34	F	R	R::99.53(132207)
S1	35	F	A	A::99.40(130360)
S1	36	F	N	N::99.84(131491)
S1	37	F	T	T::99.78(130907)
S1	38	F	R	R::98.56(128904)
S1	39	F	N	N::99.72(131547)
S1	40	F	P	P::99.69(130745)
S1	41	F	D	D::99.60(131628)
S1	42	F	W	W::99.44(131055)
S1	43	F	D	D::99.63(131514)
S1	44	F	H	H::99.67(131498)
S1	45	F	N	N::99.72(131650)
S1	46	F	P	P::99.81(131116)
S1	47	F	N	N::99.74(130970)
S1	48	F	K	K::99.81(129845)
S1	49	F	D	D::99.32(130246)
S1	50	F	H	H::99.64(130398)
S1	51	F	W	W::98.98(128423)
S1	52	F	T	T::73.00(92837) S::26.67(33915)
S1	53	F	E	E::99.41(128786)
S1	54	F	A	A::99.81(130006)
S1	55	F	N	N::99.79(130482)
S1	56	F	K	K::99.83(129939)
S1	57	F	V	V::99.68(128620)
S1	58	F	G	G::99.12(127709)
S1	59	F	V	V::99.75(128283)
S1	60	F	G	G::98.97(124890)
S1	61	F	A	A::99.26(125588)

S1	63	F	G	G::99.49(125995)
S1	64	F	P	P::99.82(120542)
S1	65	F	G	G::99.23(123635)
S1	66	F	F	F::79.25(99550) V::20.32(25527)
S1	67	F	T	T::99.75(128754)
S1	68	F	P	P::99.84(128882)
S1	69	F	P	P::99.81(128944)
S1	70	F	H	H::99.72(129726)
S1	71	F	G	G::99.31(128922)
S1	72	F	G	G::99.60(130772)
S1	73	F	L	L::99.46(131051)
S1	74	F	L	L::99.24(130551)
S1	75	F	G	G::99.66(132452)
S1	76	F	W	W::99.19(131557)
S1	77	F	S	S::99.72(132920)
S1	78	F	P	P::99.59(134296)
S1	79	F	Q	Q::99.71(135647)
S1	80	F	A	A::99.76(137463)
S1	81	F	Q	Q::99.80(138932)
S1	82	F	G	G::99.58(140622)
S1	83	F	M	M::78.64(111149) I::21.19(29956)
S1	84	F	L	L::98.51(141036)
S1	85	F	K	K::99.38(143589)
S1	86	F	T	T::99.88(144510)
S1	87	F	L	L::99.81(143826)
S1	88	F	P	P::99.79(142264)
S1	89	F	A	A::99.44(138995)
S1	90	F	D	D::99.20(139377)
S1	91	F	P	P::99.80(139505)
S1	92	F	P	P::99.89(139793)
S1	93	F	P	P::99.87(139165)
S1	94	F	A	A::99.61(137624)
S1	95	F	S	S::99.81(137067)
S1	96	F	T	T::99.86(135906)
S1	97	F	N	N::99.77(133351)
S1	98	F	R	R::99.63(130289)
S1	99	F	Q	Q::99.31(126975)
S1	100	F	S	S::99.81(124978)
S1	101	F	G	G::99.38(121993)
S1	102	F	R	R::99.80(120581)
S1	103	F	Q	Q::99.64(116757)
S1	104	F	P	P::99.62(114128)
S1	105	F	T	T::99.85(111258)
S1	106	F	P	P::99.88(107831)
S1	107	F	I	I::99.78(106190)
S1	108	F	T	T::99.73(103367)
S1	109	F	P	P::99.86(100732)
S1	110	F	P	P::99.94(98539)

Meta data	
Assembly file:	HBV-RYD-1.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-1
Date/Time	Tue 19 Mar 13:17:49 GMT 2019