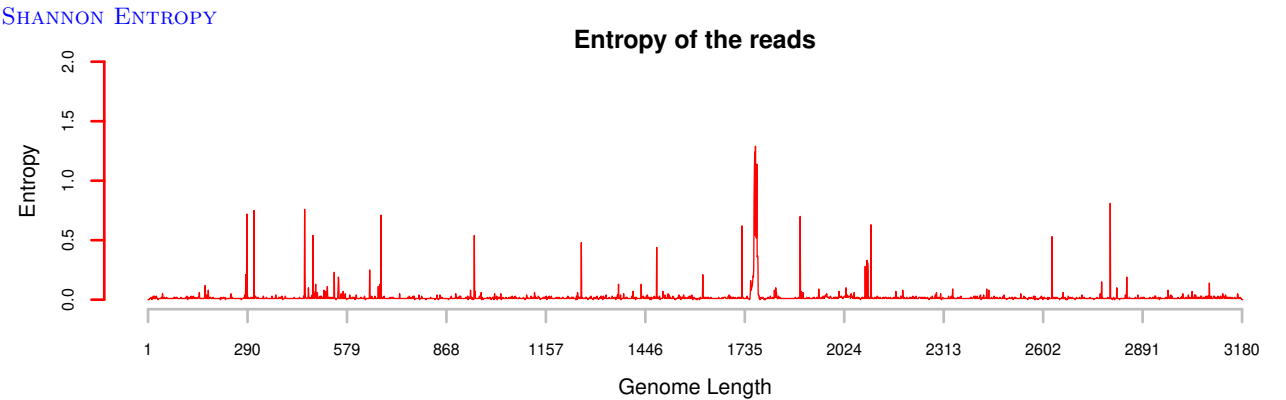
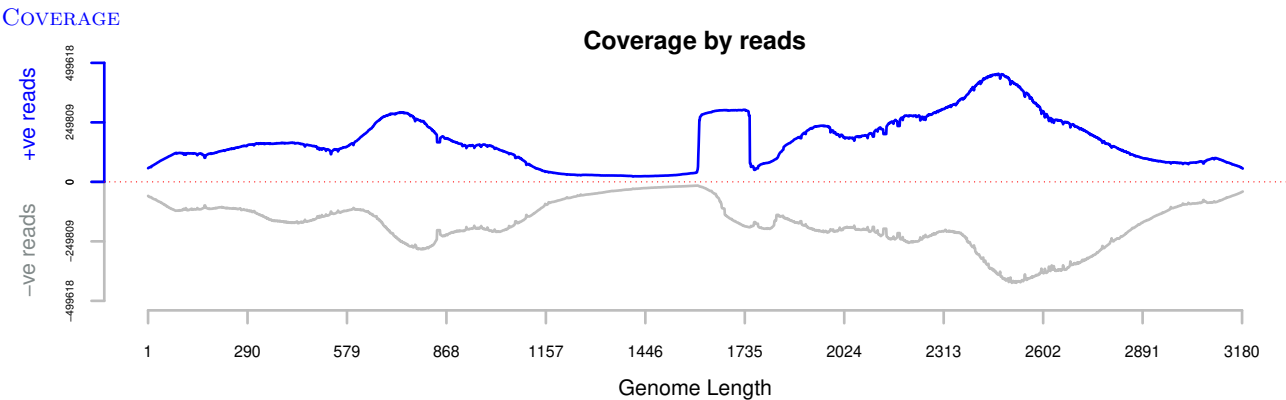


HBV-RYD-3

File name	HBV-RYD-3.sam
Ref name	KX357637.1 Hepatitis B virus isolate MK20ETH, complete genome
Ref len	3182
Program used	Tanoti Assembler 1.0
Total reads	7669620
Mapped reads	7453288 (97.18%)
Unmapped reads	216332
Mapped loan pairs	21105
Average read length	148nt
Coverage	3182nt (100.00%)
Average depth	342123 reads/site
Average insert length	2156nt



CONSENSUS SEQUENCE

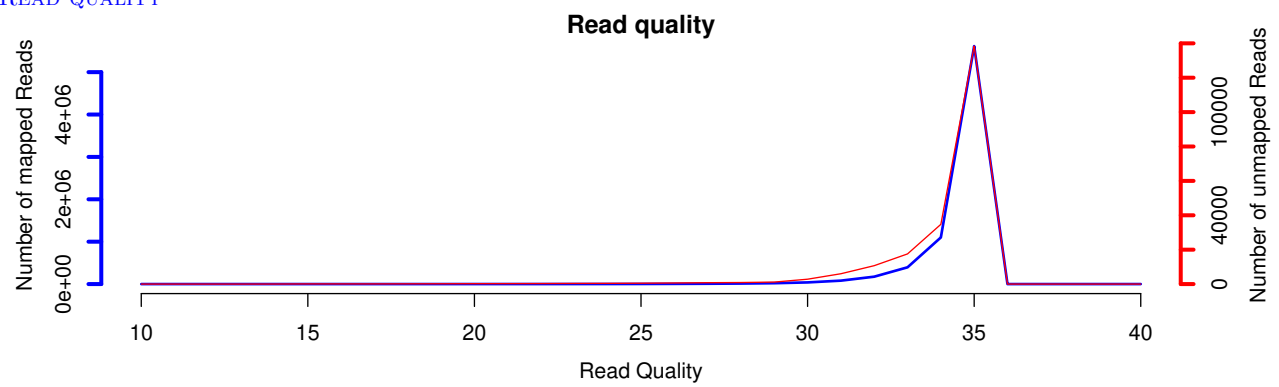
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140    ACCCTGCGCT GAACATGGAG AACACAGCAT CAGGATTCCCT AGGACCCCTG CTCGTGTTAC AGGCGGGGTT
210    TTTCTTGTG ACAAGAATCC TCACAATACC GCAGAGTCTA GACTCGTGGT GGACTTCTCT CAATTTTCTA
280    GGGGGAAC TA CCGTGTGTCT TGGCCAAAGT TCGCAGTCCC CAACCTCCAA TCACTCACCA ACCTCCTGTC
350    CTCCAAC TTG TCCTGGTTAT CGCTGGATGT GTCTGCGGCG TTTTATCATC TTCCTCTTCA TCCTGCTGCT
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1260   CCGATCCATA CTGCGGAACT CCTAGCCGCT TGTTTTGTCT GCAGCAGGTC TGGAGCAAAC ATTCTCGGGA
1330   CGGATAATCT TGTGTTCTCT TCCCGCAAAT ATACATCGTT TCCATGGCTG CTAGGCTGTG CTGCCAACTG
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1610   GAGACCACCG TGAACGCCA CCAATCTTGT CCCAAGGTCT TACATAAGAG GACTCTTGA CTCTCTGTAA
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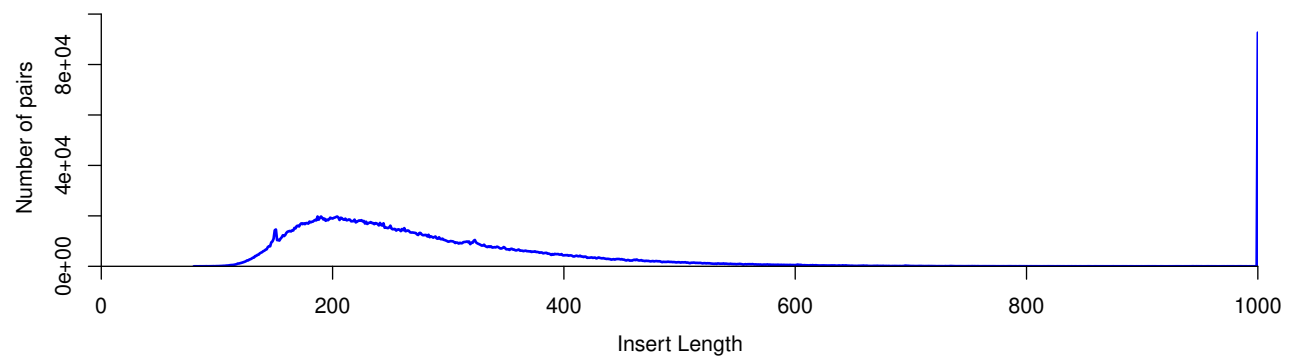
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Genome Composition	
A	727 (22.85%)
T	909 (28.57%)
G	691 (21.72%)
C	855 (26.87%)
N	0 (0.00%)
Total Nucleotides	3182
GC%	48.59

READ QUALITY



INSERT LENGTH DISTRIBUTION



AMINO ACID VARIATIONS

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::99.89(122384)
P2	2	F	N	N::99.81(125577)
P2	4	F	P	P::99.87(136106)
P2	5	F	P	P::99.63(139745)
P2	6	F	N	N::99.66(144587)
P2	7	F	S	S::99.91(148292)
P2	8	F	A	A::99.55(153863)
P2	9	F	R	R::99.86(159581)
P2	10	F	S	S::99.89(163481)
P2	11	F	Q	Q::99.82(169115)
P2	12	F	S	S::99.81(173254)
P2	13	F	E	E::99.75(178906)
P2	14	F	R	R::99.35(182010)
P2	15	F	P	P::99.80(188548)
P2	16	F	V	V::99.79(193622)
P2	18	F	P	P::99.80(204483)
P2	19	F	C	C::99.84(207422)
P2	20	F	W	W::99.82(212653)
P2	21	F	W	W::99.79(216945)
P2	22	F	L	L::99.86(221265)
P2	23	F	Q	Q::99.85(226597)
P2	25	F	R	R::99.77(234684)
P2	26	F	N	N::99.77(239169)
P2	27	F	S	S::99.78(238903)
P2	28	F	K	K::99.74(237004)
P2	29	F	P	P::99.91(238492)
P2	30	F	C	C::99.85(236991)
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P2	36	F	S	S::99.84(223073)
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P2	38	F	I	I::99.92(236098)
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P2	45	F	W	W::99.77(229727)
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P2	49	F	A	A::99.69(229886)

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P2	227	F	S	S::99.86(442660)
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P2	300	F	G	G::99.84(362469)
P2	301	F	S	S::99.85(358248)
P2	302	F	L	L::99.90(361189)
P2	303	F	P	P::99.83(357796)
P2	304	F	Q	Q::99.88(350659)
P2	305	F	D	D::99.79(352853)
P2	306	F	H	H::99.84(354660)
P2	307	F	I	I::99.90(352351)
P2	308	F	I	I::99.69(329936)
P2	309	F	Q	Q::99.76(344105)
P2	310	F	K	K::99.91(345712)
P2	311	F	I	I::99.87(345292)
P2	312	F	K	K::98.93(338422)
P2	313	F	E	E::99.59(342587)
P2	314	F	C	C::99.89(342802)
P2	316	F	R	R::99.75(324571)
P2	317	F	K	K::99.82(342206)
P2	318	F	L	L::99.91(343144)
P2	319	F	P	P::99.92(346126)
P2	320	F	V	V::99.89(345781)

P2	321	F	N	N::99.66(345274)
P2	322	F	R	R::99.85(331603)
P2	323	F	P	P::99.89(344405)
P2	324	F	I	I::99.87(348447)
P2	325	F	D	D::99.85(350162)
P2	326	F	W	W::99.78(348299)
P2	327	F	K	K::99.88(349571)
P2	328	F	V	V::99.89(338511)
P2	329	F	C	C::99.85(344405)
P2	330	F	Q	Q::99.85(350859)
P2	331	F	R	R::99.74(351762)
P2	332	F	I	I::99.85(352074)
P2	333	F	V	V::99.88(352567)
P2	334	F	G	G::99.88(350655)
P2	335	F	L	L::99.90(337841)
P2	336	F	L	L::99.84(345105)
P2	337	F	G	G::99.87(346572)
P2	339	F	A	A::99.65(341730)
P2	340	F	A	A::99.73(338981)
P2	341	F	P	P::99.88(339469)
P2	343	F	T	T::99.87(330939)
P2	344	F	Q	Q::99.87(327649)
P2	345	F	C	C::99.86(324552)
P2	346	F	G	G::99.87(322129)
P2	347	F	Y	Y::99.89(317296)
P2	348	F	P	P::99.90(317104)
P2	349	F	A	A::99.84(300713)
P2	350	F	L	L::99.91(305056)
P2	351	F	M	M::99.71(304429)
P2	352	F	P	P::99.80(301273)
P2	353	F	L	L::99.89(296666)
P2	354	F	Y	Y::99.85(293001)
P2	355	F	A	A::99.74(265426)
P2	356	F	C	C::99.71(265298)
P2	357	F	I	I::99.90(274627)
P2	358	F	Q	Q::99.79(274838)
P2	359	F	S	S::99.88(269715)
P2	360	F	K	K::99.89(264641)
P2	361	F	Q	Q::99.77(258989)
P2	362	F	A	A::99.85(254113)
P2	364	F	T	T::99.85(243564)
P2	366	F	S	S::99.90(210101)
P2	367	F	P	P::99.83(217032)
P2	368	F	T	T::99.92(219245)
P2	369	F	Y	Y::99.88(214606)
P2	370	F	K	K::99.82(208969)
P2	371	F	A	A::99.58(204547)
P2	373	F	L	L::99.93(193153)
P2	374	F	C	C::99.17(187371)
P2	375	F	K	K::99.49(182357)
P2	376	F	Q	Q::99.86(177682)

P2	377	F	Y	Y::99.90(173375)
P2	378	F	L	L::99.55(168795)
P2	379	F	N	N::99.71(164798)
P2	380	F	L	L::99.90(159593)
P2	381	F	Y	Y::99.89(153215)
P2	382	F	P	P::99.92(149670)
P2	383	F	V	V::99.78(146289)
P2	384	F	A	A::99.69(133650)
P2	385	F	R	R::99.83(137617)
P2	386	F	Q	Q::99.85(136337)
P2	387	F	R	R::99.84(132113)
P2	388	F	P	P::99.81(124289)
P2	389	F	G	G::99.87(126959)
P2	390	F	L	L::99.93(123449)
P2	391	F	C	C::99.78(121704)
P2	392	F	Q	Q::99.83(120465)
P2	393	F	V	V::99.89(119655)
P2	395	F	A	A::99.70(115625)
P2	396	F	D	D::99.83(113614)
P2	397	F	A	A::99.72(110960)
P2	398	F	T	T::99.82(110330)
P2	399	F	P	P::99.88(108888)
P2	400	F	T	T::99.86(107077)
P2	401	F	G	G::99.75(105085)
P2	402	F	W	W::99.77(103121)
P2	403	F	G	G::99.86(102006)
P2	404	F	L	L::99.88(100154)
P2	405	F	V	V::99.86(94469)
P2	406	F	M	M::99.49(97285)
P2	407	F	G	G::99.77(97308)
P2	408	F	H	H::99.78(96490)
P2	409	F	Q	Q::99.75(94747)
P2	410	F	R	R::99.64(93403)
P2	411	F	M	M::99.60(92270)
P2	412	F	R	R::99.74(90708)
P2	413	F	G	G::99.83(89723)
P2	414	F	T	T::99.86(89525)
P2	416	F	L	L::99.51(83074)
P2	417	F	A	A::99.76(86299)
P2	418	F	P	P::99.89(84872)
P2	419	F	L	L::99.89(80075)
P2	420	F	P	P::99.74(84011)
P2	421	F	I	I::99.86(84166)
P2	422	F	H	H::99.87(83352)
P2	423	F	T	T::99.86(82792)
P2	424	F	A	A::99.80(81856)
P2	425	F	E	E::99.81(80990)
P2	426	F	L	L::99.92(80745)
P2	427	F	L	L::99.90(79983)
P2	428	F	A	A::99.90(79520)
P2	429	F	A	A::99.71(79333)

P2	430	F	C	C::99.89(78099)
P2	432	F	A	A::99.75(76740)
P2	433	F	R	R::99.75(75871)
P2	434	F	S	S::99.81(75430)
P2	435	F	R	R::99.77(74889)
P2	436	F	S	S::99.88(73622)
P2	437	F	G	G::99.89(72501)
P2	438	F	A	A::99.85(71494)
P2	439	F	N	N::99.56(71314)
P2	440	F	I	I::99.84(71053)
P2	441	F	L	L::99.66(69619)
P2	442	F	G	G::99.83(69127)
P2	443	F	T	T::99.86(68177)
P2	444	F	D	D::99.85(67718)
P2	445	F	N	N::99.84(67061)
P2	446	F	S	S::99.90(66295)
P2	447	F	V	V::99.86(65784)
P2	448	F	V	V::99.91(65205)
P2	449	F	L	L::99.86(64171)
P2	450	F	S	S::99.89(63672)
P2	451	F	R	R::99.73(63917)
P2	452	F	K	K::99.80(63387)
P2	453	F	Y	Y::99.81(62921)
P2	454	F	T	T::99.86(62222)
P2	455	F	S	S::99.88(61816)
P2	457	F	P	P::99.89(61131)
P2	458	F	W	W::99.82(60324)
P2	459	F	L	L::99.92(59666)
P2	460	F	L	L::99.90(58520)
P2	461	F	G	G::99.84(58324)
P2	462	F	C	C::99.80(57121)
P2	463	F	A	A::99.62(56902)
P2	464	F	A	A::99.71(56929)
P2	465	F	N	N::99.86(56546)
P2	466	F	W	W::99.81(55725)
P2	467	F	I	I::99.88(55506)
P2	468	F	L	L::99.88(54460)
P2	469	F	R	R::99.74(50198)
P2	470	F	G	G::99.89(52123)
P2	471	F	T	T::99.83(52006)
P2	472	F	S	S::99.88(51732)
P2	474	F	V	V::99.88(51539)
P2	475	F	Y	Y::99.83(50741)
P2	476	F	V	V::99.82(50641)
P2	477	F	P	P::99.87(50119)
P2	478	F	S	S::99.84(49509)
P2	479	F	A	A::99.70(49443)
P2	480	F	L	L::99.83(49446)
P2	481	F	N	N::99.83(49689)
P2	482	F	P	P::99.89(49297)
P2	483	F	A	A::99.83(48800)

P2	484	F	D	D::99.79(48585)
P2	485	F	D	D::99.69(48495)
P2	486	F	P	P::99.93(48693)
P2	487	F	S	S::99.95(48238)
P2	488	F	R	R::99.92(48148)
P2	489	F	G	G::99.84(48139)
P2	490	F	R	R::99.66(47913)
P2	491	F	L	L::99.85(48104)
P2	492	F	G	G::99.85(47875)
P2	493	F	L	L::99.81(47935)
P2	494	F	S	S::99.84(47657)
P2	495	F	R	R::99.64(47621)
P2	496	F	P	P::99.92(48027)
P2	497	F	L	L::99.85(47833)
P2	498	F	L	L::99.81(47551)
P2	499	F	R	R::99.72(47453)
P2	500	F	L	L::99.87(47497)
P2	501	F	P	P::99.76(47694)
P2	503	F	R	R::99.79(46712)
P2	504	F	P	P::99.82(47028)
P2	505	F	T	T::99.67(47434)
P2	506	F	T	T::99.76(47314)
P2	507	F	G	G::99.87(47574)
P2	508	F	R	R::99.60(47265)
P2	509	F	T	T::99.83(47721)
P2	510	F	S	S::99.88(47630)
P2	511	F	L	L::99.93(47788)
P2	512	F	Y	Y::99.86(47839)
P2	513	F	A	A::99.79(48176)
P2	514	F	D	D::99.49(48462)
P2	515	F	S	S::99.72(48693)
P2	516	F	P	P::99.92(49369)
P2	517	F	S	S::99.89(50068)
P2	518	F	V	V::99.80(50516)
P2	519	F	P	P::99.71(50298)
P2	520	F	S	S::99.88(50574)
P2	521	F	H	H::99.83(50890)
P2	522	F	L	L::99.88(50886)
P2	523	F	P	P::99.76(51294)
P2	524	F	D	D::99.56(51569)
P2	525	F	R	R::99.66(52072)
P2	526	F	V	V::99.84(52557)
P2	527	F	H	H::99.79(52481)
P2	529	F	A	A::99.77(52739)
P2	530	F	S	S::99.88(52780)
P2	531	F	P	P::99.94(54226)
P2	532	F	L	L::99.89(62595)
P2	533	F	H	H::99.80(129775)
P2	534	F	V	V::99.95(277237)
P2	535	F	A	A::99.77(292848)
P2	536	F	W	W::99.84(299915)

P2	537	F	R	R::96.53(293762)
P2	538	F	P	P::99.85(307348)
S2	1	F	S	S::100.00(117460)
S2	2	F	T	T::99.85(123773)
S2	3	F	T	T::99.90(125680)
S2	5	F	H	H::99.82(137417)
S2	6	F	Q	Q::99.80(141787)
S2	7	F	T	T::99.69(146087)
S2	8	F	L	L::99.90(149782)
S2	9	F	Q	Q::99.67(155672)
S2	10	F	D	D::99.89(161166)
S2	11	F	P	P::99.88(166081)
S2	12	F	R	R::99.83(170717)
S2	13	F	V	V::99.91(174925)
S2	14	F	R	R::99.79(179987)
S2	15	F	G	G::99.74(185149)
S2	16	F	L	L::99.74(189274)
S2	17	F	Y	Y::99.83(194543)
S2	19	F	P	P::99.89(205988)
S2	20	F	A	A::99.80(210533)
S2	21	F	G	G::99.87(215365)
S2	22	F	G	G::99.84(219184)
S2	23	F	S	S::99.84(222115)
S2	24	F	S	S::99.84(228033)
S2	25	F	S	S::99.85(230891)
S2	26	F	G	G::99.70(235951)
S2	27	F	T	T::99.87(238229)
S2	28	F	V	V::99.68(236218)
S2	29	F	N	N::99.82(237665)
S2	30	F	P	P::99.89(238978)
S2	31	F	V	V::99.88(237960)
S2	32	F	P	P::99.86(236162)
S2	33	F	T	T::99.89(235735)
S2	34	F	T	T::99.87(236422)
S2	35	F	V	V::99.86(226497)
S2	36	F	S	S::99.90(233518)
S2	37	F	H	H::99.76(222881)
S2	38	F	I	I::99.67(235330)
S2	39	F	S	S::99.86(234572)
S2	40	F	S	S::99.87(232550)
S2	41	F	I	I::99.75(232840)
S2	43	F	S	S::99.83(227191)
S2	44	F	R	R::99.67(231906)
S2	45	F	I	I::99.77(231016)
S2	46	F	G	G::99.81(231083)
S2	47	F	D	D::99.85(230869)
S2	48	F	P	P::99.79(220830)
S2	49	F	A	A::99.72(229750)
S2	50	F	L	L::99.30(228509)
S2	51	F	N	N::99.84(230969)
S2	52	F	M	M::99.76(230269)

S2	53	F	E	E::99.79(223531)
S2	54	F	N	N::99.88(221473)
S2	55	F	T	T::99.84(199679)
S2	56	F	A	A::98.44(197074)
S2	57	F	S	S::99.90(220378)
S2	58	F	G	G::99.83(225322)
S2	60	F	L	L::99.92(226839)
S2	61	F	G	G::99.68(226754)
S2	62	F	P	P::99.89(227612)
S2	63	F	L	L::99.88(227399)
S2	64	F	L	L::99.88(228399)
S2	65	F	V	V::99.83(228902)
S2	66	F	L	L::99.88(228529)
S2	67	F	Q	Q::99.80(229973)
S2	68	F	A	A::99.85(230138)
S2	69	F	G	G::99.89(231036)
S2	72	F	L	L::99.89(232174)
S2	73	F	L	L::99.81(235115)
S2	74	F	T	T::99.88(234561)
S2	75	F	R	R::99.77(237716)
S2	76	F	I	I::99.92(241115)
S2	77	F	L	L::99.85(241410)
S2	78	F	T	T::99.83(241414)
S2	79	F	I	I::99.88(243982)
S2	80	F	P	P::99.83(245557)
S2	81	F	Q	Q::99.29(244413)
S2	82	F	S	S::99.73(248217)
S2	83	F	L	L::99.90(244800)
S2	84	F	D	D::99.87(250218)
S2	85	F	S	S::99.85(249539)
S2	86	F	W	W::99.81(252055)
S2	87	F	W	W::99.77(253474)
S2	88	F	T	T::99.88(255708)
S2	89	F	S	S::99.91(255561)
S2	90	F	L	L::99.87(257622)
S2	91	F	N	N::99.83(263618)
S2	93	F	L	L::99.86(261271)
S2	94	F	G	G::99.48(265044)
S2	95	F	G	G::96.80(256351)
S2	96	F	T	T::80.46(213844) N::19.35(51421)
S2	97	F	T	T::99.85(271889)
S2	98	F	V	V::99.77(273874)
S2	99	F	C	C::99.84(274299)
S2	100	F	L	L::99.81(274937)
S2	101	F	G	G::99.73(278361)
S2	102	F	Q	Q::99.83(279575)
S2	103	F	S	S::79.05(217414) N::20.86(57357)
S2	104	F	S	S::99.83(282220)
S2	105	F	Q	Q::99.69(286107)
S2	106	F	S	S::99.83(288417)
S2	107	F	P	P::99.81(289164)

S2	108	F	T	T::99.83(293927)
S2	109	F	S	S::99.83(295743)
S2	110	F	N	N::99.87(297920)
S2	111	F	H	H::99.87(300706)
S2	112	F	S	S::99.64(297169)
S2	113	F	P	P::99.85(301437)
S2	114	F	T	T::99.87(305347)
S2	115	F	S	S::99.78(306501)
S2	116	F	C	C::99.81(307597)
S2	117	F	P	P::99.86(313103)
S2	118	F	P	P::99.85(312533)
S2	119	F	T	T::99.83(316006)
S2	120	F	C	C::99.58(313135)
S2	121	F	P	P::99.85(318618)
S2	122	F	G	G::99.89(319735)
S2	123	F	Y	Y::99.90(319377)
S2	124	F	R	R::99.52(318862)
S2	125	F	W	W::99.81(320612)
S2	126	F	M	M::99.83(322138)
S2	127	F	C	C::99.72(322336)
S2	128	F	L	L::99.79(321324)
S2	129	F	R	R::99.75(323240)
S2	130	F	R	R::99.62(322642)
S2	132	F	I	I::99.87(326927)
S2	133	F	I	I::99.90(326664)
S2	135	F	L	L::99.89(328801)
S2	137	F	I	I::99.87(330462)
S2	138	F	L	L::99.87(329859)
S2	139	F	L	L::99.88(330397)
S2	140	F	L	L::99.89(330234)
S2	141	F	C	C::99.84(329678)
S2	142	F	L	L::99.80(330992)
S2	143	F	I	I::99.89(328756)
S2	145	F	L	L::99.89(323657)
S2	146	F	L	L::99.87(330294)
S2	147	F	V	V::99.83(329255)
S2	148	F	L	L::99.87(324994)
S2	149	F	L	L::99.89(322380)
S2	150	F	D	D::99.86(325046)
S2	151	F	Y	Y::99.64(321144)
S2	152	F	Q	Q::74.51(228834) R::21.95(67399)
S2	153	F	G	G::99.72(316452)
S2	154	F	M	M::99.79(318466)
S2	155	F	L	L::99.83(315244)
S2	156	F	P	P::98.52(310295)
S2	157	F	V	V::99.80(313057)
S2	158	F	C	C::99.84(308524)
S2	159	F	P	P::99.83(309307)
S2	160	F	L	L::89.22(270951) P::9.73(29547)
S2	161	F	I	I::98.73(302445)
S2	162	F	P	P::99.64(300913)

S2	163	F	G	G::98.25(293627)
S2	164	F	S	S::99.85(282465)
S2	165	F	S	S::99.84(286345)
S2	166	F	T	T::99.87(276901)
S2	167	F	T	T::99.67(283473)
S2	168	F	S	S::99.69(284283)
S2	169	F	T	T::99.84(273294)
S2	170	F	G	G::99.77(280972)
S2	171	F	P	P::99.09(276449)
S2	172	F	C	C::99.80(276815)
S2	173	F	R	R::99.71(265685)
S2	174	F	T	T::98.56(271364)
S2	175	F	C	C::99.70(271631)
S2	176	F	T	T::99.79(267084)
S2	177	F	T	T::99.87(240497)
S2	178	F	P	P::99.87(240491)
S2	179	F	A	A::99.71(260427)
S2	180	F	Q	Q::99.85(264995)
S2	181	F	G	G::96.11(252750)
S2	182	F	T	T::99.82(264275)
S2	183	F	S	S::99.83(262135)
S2	184	F	I	I::99.01(245622)
S2	185	F	Y	Y::95.20(246531)
S2	186	F	P	P::99.83(262581)
S2	187	F	S	S::99.85(261933)
S2	188	F	C	C::99.81(262204)
S2	189	F	C	C::99.84(261712)
S2	190	F	C	C::99.84(262305)
S2	191	F	T	T::99.64(262454)
S2	192	F	K	K::99.88(263571)
S2	193	F	P	P::99.92(265284)
S2	194	F	S	S::99.85(263668)
S2	195	F	D	D::99.83(267567)
S2	196	F	G	G::99.35(267291)
S2	197	F	N	N::99.88(273191)
S2	198	F	C	C::99.79(271768)
S2	199	F	T	T::99.88(263105)
S2	200	F	C	C::99.67(273451)
S2	201	F	I	I::99.91(280398)
S2	202	F	P	P::99.52(280979)
S2	203	F	I	I::99.89(286223)
S2	204	F	P	P::99.85(289020)
S2	205	F	S	S::99.86(292143)
S2	206	F	S	S::99.90(298542)
S2	207	F	W	W::99.76(301796)
S2	208	F	A	A::99.85(307377)
S2	210	F	G	G::99.67(314985)
S2	211	F	K	K::99.89(322780)
S2	213	F	L	L::99.89(330992)
S2	214	F	W	W::99.84(337045)
S2	215	F	E	E::96.14(332826)

S2	216	F	W	W::99.75(349852)
S2	217	F	A	A::99.66(356028)
S2	218	F	S	S::99.81(359434)
S2	219	F	A	A::99.81(373111)
S2	220	F	R	R::99.67(380084)
S2	222	F	S	S::99.89(392628)
S2	223	F	W	W::98.56(398160)
S2	224	F	L	L::98.98(408144)
S2	225	F	S	S::98.19(413600)
S2	226	F	L	L::80.68(341462) S::19.23(81397)
S2	227	F	L	L::99.92(434837)
S2	228	F	V	V::99.76(446018)
S2	229	F	P	P::99.64(450222)
S2	231	F	V	V::99.87(466949)
S2	232	F	Q	Q::99.80(470535)
S2	233	F	W	W::99.85(475354)
S2	235	F	V	V::99.76(487903)
S2	236	F	G	G::99.88(495116)
S2	237	F	L	L::99.83(494741)
S2	238	F	S	S::99.77(496860)
S2	239	F	P	P::99.84(507326)
S2	240	F	T	T::99.87(510025)
S2	241	F	V	V::99.87(516580)
S2	242	F	W	W::99.78(518354)
S2	243	F	L	L::99.85(525332)
S2	244	F	S	S::99.41(523403)
S2	245	F	V	V::99.87(535356)
S2	246	F	I	I::99.85(535793)
S2	247	F	W	W::99.78(536891)
S2	248	F	M	M::99.79(539868)
S2	249	F	M	M::99.81(540899)
S2	250	F	W	W::99.78(541708)
S2	251	F	Y	Y::99.83(543990)
S2	252	F	W	W::99.79(543792)
S2	253	F	G	G::99.86(545052)
S2	254	F	P	P::99.76(539543)
S2	255	F	S	S::99.75(543859)
S2	256	F	L	L::99.92(539707)
S2	257	F	Y	Y::99.60(538016)
S2	258	F	S	S::99.60(538234)
S2	259	F	I	I::99.89(517613)
S2	260	F	L	L::99.82(529630)
S2	261	F	S	S::99.80(535269)
S2	262	F	P	P::99.84(536534)
S2	264	F	L	L::99.83(527417)
S2	265	F	P	P::99.84(530290)
S2	266	F	L	L::99.90(529863)
S2	267	F	L	L::99.86(524783)
S2	268	F	P	P::99.84(519112)
S2	269	F	I	I::99.91(519795)
S2	272	F	C	C::99.84(498656)

S2	273	F	L	L::99.84(494930)
S2	274	F	W	W::99.77(488438)
S2	275	F	V	V::99.82(479928)
S2	276	F	Y	Y::99.83(474348)
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X	1	F	M	M::99.51(60689)
X	2	F	A	A::99.83(60002)
X	3	F	A	A::99.80(59393)
X	4	F	R	R::99.50(58332)
X	5	F	L	L::99.87(57527)
X	6	F	C	C::99.72(56818)
X	7	F	C	C::99.72(56481)
X	8	F	Q	Q::99.81(56412)
X	9	F	L	L::99.90(56067)
X	10	F	D	D::99.84(55890)
X	11	F	P	P::99.84(54952)
X	12	F	A	A::99.44(52974)
X	13	F	R	R::99.54(50093)
X	14	F	D	D::99.81(52335)
X	15	F	V	V::99.73(51945)
X	16	F	L	L::99.76(51599)
X	17	F	C	C::99.84(51202)
X	18	F	L	L::99.80(50818)
X	19	F	R	R::99.78(50614)
X	20	F	P	P::99.90(50271)
X	21	F	V	V::98.15(49025)
X	22	F	G	G::99.70(49485)
X	23	F	A	A::99.68(49558)
X	24	F	E	E::99.74(49567)
X	25	F	S	S::99.89(49155)
X	26	F	R	R::99.65(48871)
X	27	F	G	G::99.52(48283)
X	28	F	R	R::99.80(48154)
X	29	F	P	P::99.92(48697)
X	31	F	S	S::99.78(47624)
X	32	F	G	G::99.88(48133)
X	33	F	P	P::99.75(47794)
X	34	F	L	L::99.79(48175)
X	35	F	G	G::99.75(48271)
X	36	F	T	T::90.88(43605) A::8.96(4298)
X	37	F	L	L::99.80(47782)
X	38	F	S	S::99.81(47410)
X	39	F	S	S::99.83(47823)
X	40	F	P	P::99.88(47984)
X	41	F	S	S::99.78(47571)
X	42	F	P	P::99.02(47311)
X	43	F	S	S::99.70(47472)
X	44	F	A	A::99.47(47560)
X	45	F	V	V::99.74(47634)
X	46	F	S	S::99.81(46995)
X	47	F	T	T::99.52(46997)
X	48	F	D	D::99.30(47261)

X	49	F	H	H::99.73(47487)
X	50	F	G	G::99.84(47579)
X	51	F	A	A::99.82(47290)
X	52	F	H	H::99.77(47584)
X	53	F	L	L::99.86(47805)
X	54	F	S	S::99.94(47670)
X	55	F	L	L::99.87(47505)
X	56	F	R	R::99.82(48104)
X	57	F	G	G::99.75(48282)
X	58	F	L	L::99.71(48551)
X	59	F	P	P::99.93(49392)
X	60	F	V	V::99.77(49896)
X	61	F	C	C::99.69(50056)
X	62	F	A	A::99.31(50272)
X	64	F	S	S::99.81(50378)
X	65	F	S	S::99.89(50877)
X	66	F	A	A::99.70(51205)
X	67	F	G	G::99.72(51450)
X	68	F	P	P::99.85(51861)
X	69	F	C	C::99.79(52390)
X	70	F	A	A::99.44(52059)
X	71	F	L	L::99.93(52659)
X	72	F	R	R::99.68(52439)
X	74	F	T	T::99.87(53424)
X	75	F	S	S::99.92(55372)
X	76	F	A	A::99.79(78724)
X	77	F	R	R::99.92(223517)
X	78	F	R	R::99.69(290369)
X	79	F	M	M::99.84(296494)
X	80	F	E	E::99.79(302883)
X	81	F	T	T::99.73(306229)
X	82	F	T	T::99.75(309144)
X	83	F	V	V::99.75(313066)
X	84	F	N	N::99.80(316224)
X	85	F	A	A::99.79(319246)
X	86	F	H	H::99.77(323259)
X	87	F	Q	Q::99.81(326590)
X	89	F	L	L::99.88(329188)
X	90	F	P	P::99.82(337669)
X	91	F	K	K::99.81(341785)
X	92	F	V	V::99.89(346850)
X	93	F	L	L::99.85(347076)
X	94	F	H	H::99.84(357034)
X	95	F	K	K::99.89(362870)
X	96	F	R	R::99.81(367269)
X	97	F	T	T::99.85(380183)
X	98	F	L	L::99.79(386777)
X	99	F	G	G::99.85(404864)
X	100	F	L	L::99.88(410753)
X	101	F	S	S::99.69(410591)
X	102	F	V	V::99.76(436524)

X	103	F	M	M::99.78(440827)
X	104	F	S	S::99.84(441360)
X	105	F	T	T::99.68(444346)
X	106	F	T	T::99.50(446363)
X	107	F	D	D::99.59(451300)
X	108	F	L	L::99.82(454641)
X	109	F	E	E::99.77(457496)
X	110	F	A	A::99.72(459295)
X	111	F	Y	Y::99.81(462870)
X	113	F	K	K::99.81(466294)
X	114	F	D	D::99.74(469503)
X	115	F	C	C::99.65(469814)
X	116	F	L	L::99.78(473728)
X	118	F	K	K::85.44(409047) N::14.38(68857)
X	119	F	D	D::99.60(481520)
X	120	F	W	W::99.75(483012)
X	121	F	E	E::99.85(486181)
X	122	F	E	E::99.86(484716)
X	123	F	L	L::99.69(482825)
X	124	F	G	G::99.86(484168)
X	125	F	E	E::99.86(465740)
X	126	F	E	E::99.86(265740)
X	127	F	I	I::98.75(241253)
X	128	F	R	R::99.82(247564)
X	129	F	L	L::99.45(235494)
X	130	F	K	K::86.95(139119) N::10.15(16238)
X	131	F	V	V::96.52(134841)
X	133	F	V	V::79.11(161351) I::20.81(42440)
X	134	F	L	L::99.75(209019)
X	135	F	G	G::99.84(256560)
X	136	F	G	G::99.90(261122)
X	137	F	C	C::99.70(262647)
X	138	F	R	R::99.81(266807)
X	139	F	H	H::99.78(270016)
X	140	F	K	K::99.93(271567)
X	141	F	L	L::99.86(272057)
X	142	F	V	V::99.88(272557)
X	143	F	C	C::99.85(269210)
X	144	F	A	A::99.80(271126)
X	145	F	P	P::99.83(274523)
X	146	F	A	A::99.59(273540)
X	147	F	P	P::99.88(271797)
X	148	F	C	C::99.73(269948)
X	149	F	N	N::99.86(269364)
X	152	F	T	T::99.25(230088)
X	153	F	S	S::99.87(238211)
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C	1	F	M	M::99.83(374274)
C	2	F	D	D::99.29(378150)
C	3	F	I	I::99.91(385935)
C	4	F	D	D::99.80(377613)
C	5	F	P	P::99.84(394765)

C	6	F	Y	Y::99.84(397416)
C	7	F	K	K::99.89(404430)
C	8	F	E	E::99.77(410635)
C	10	F	G	G::99.83(414762)
C	11	F	A	A::99.86(419658)
C	12	F	T	T::99.77(424497)
C	13	F	V	V::99.81(429646)
C	14	F	E	E::99.83(431049)
C	15	F	L	L::99.82(430115)
C	16	F	L	L::99.86(433982)
C	17	F	S	S::98.81(426978)
C	19	F	L	L::99.89(435358)
C	20	F	P	P::99.76(440054)
C	21	F	S	S::99.83(436799)
C	22	F	D	D::99.83(440239)
C	25	F	P	P::99.72(439150)
C	26	F	S	S::99.85(432785)
C	27	F	V	V::99.84(433933)
C	28	F	R	R::99.68(404659)
C	29	F	D	D::99.73(415063)
C	30	F	L	L::99.87(413287)
C	31	F	L	L::99.89(400344)
C	32	F	D	D::99.89(411333)
C	33	F	T	T::99.84(403965)
C	34	F	A	A::99.77(401320)
C	35	F	S	S::99.82(395234)
C	36	F	A	A::99.86(397376)
C	37	F	L	L::99.90(379863)
C	38	F	Y	Y::99.74(392059)
C	39	F	R	R::99.70(393439)
C	40	F	E	E::99.76(388236)
C	41	F	A	A::99.87(376972)
C	42	F	L	L::99.73(366747)
C	43	F	E	E::99.79(370412)
C	44	F	S	S::99.89(370437)
C	45	F	P	P::99.64(370566)
C	46	F	E	E::99.77(369054)
C	47	F	H	H::99.69(369928)
C	48	F	C	C::99.73(367278)
C	49	F	S	S::99.84(367230)
C	50	F	P	P::99.74(372113)
C	51	F	H	H::99.60(354529)
C	52	F	H	H::99.86(375950)
C	53	F	T	T::99.85(383972)
C	54	F	A	A::99.71(381495)
C	55	F	L	L::99.79(383030)
C	56	F	R	R::99.82(383714)
C	57	F	Q	Q::99.88(382426)
C	58	F	A	A::99.83(383656)
C	59	F	I	I::99.79(389812)
C	60	F	L	L::99.82(386374)

C	61	F	C	C::99.80(385038)
C	62	F	W	W::99.74(361813)
C	63	F	G	G::99.86(390511)
C	64	F	E	E::93.93(350256) N::5.05(18836)
C	65	F	L	L::99.92(373951)
C	66	F	M	M::99.75(404278)
C	67	F	T	T::99.86(408787)
C	68	F	L	L::99.91(404314)
C	69	F	A	A::99.79(378059)
C	70	F	T	T::99.88(378366)
C	71	F	W	W::99.70(414086)
C	72	F	V	V::99.87(423439)
C	73	F	G	G::99.91(426416)
C	74	F	G	G::99.63(412487)
C	75	F	N	N::99.82(440871)
C	76	F	L	L::99.85(441979)
C	77	F	E	E::99.79(443450)
C	78	F	D	D::99.85(444274)
C	79	F	P	P::99.82(438128)
C	80	F	I	I::99.81(396346)
C	81	F	S	S::99.88(396686)
C	82	F	R	R::99.74(396118)
C	83	F	D	D::99.82(460294)
C	84	F	L	L::99.88(470820)
C	85	F	V	V::99.86(476716)
C	86	F	V	V::99.85(481034)
C	87	F	S	S::99.82(485411)
C	88	F	Y	Y::99.88(485632)
C	89	F	V	V::99.89(472495)
C	90	F	N	N::99.87(488741)
C	91	F	T	T::99.81(494345)
C	92	F	N	N::99.11(487287)
C	93	F	M	M::99.62(447939)
C	94	F	G	G::99.77(448593)
C	95	F	L	L::99.89(449022)
C	96	F	K	K::99.81(498748)
C	98	F	R	R::99.75(489772)
C	99	F	Q	Q::99.68(508943)
C	100	F	L	L::99.88(513636)
C	101	F	L	L::99.81(517410)
C	102	F	W	W::99.61(519832)
C	104	F	H	H::99.81(525491)
C	105	F	I	I::99.82(526934)
C	106	F	S	S::99.82(524883)
C	107	F	C	C::99.81(519540)
C	108	F	L	L::99.83(521205)
C	109	F	T	T::99.86(524067)
C	111	F	G	G::99.81(516330)
C	112	F	R	R::99.77(515611)
C	113	F	E	E::99.77(519471)
C	114	F	T	T::99.79(519349)

C	115	F	V	V::99.70(488925)
C	116	F	I	I::99.78(504965)
C	117	F	E	E::99.73(508892)
C	118	F	Y	Y::99.84(488174)
C	119	F	L	L::99.89(500413)
C	120	F	V	V::99.87(481814)
C	121	F	S	S::99.88(498031)
C	123	F	G	G::99.89(500409)
C	124	F	V	V::99.92(503948)
C	125	F	W	W::99.69(499849)
C	126	F	I	I::99.88(500756)
C	127	F	R	R::99.55(494920)
C	128	F	T	T::99.90(500173)
C	129	F	P	P::99.90(502277)
C	130	F	P	P::99.28(496236)
C	131	F	A	A::99.19(498855)
C	132	F	Y	Y::99.85(499127)
C	133	F	R	R::99.67(498275)
C	134	F	P	P::99.84(499400)
C	135	F	P	P::99.32(497404)
C	136	F	N	N::99.92(505988)
C	137	F	A	A::99.77(502464)
C	138	F	P	P::99.79(506078)
C	139	F	I	I::99.90(505592)
C	140	F	L	L::99.89(502850)
C	141	F	S	S::99.90(508524)
C	142	F	T	T::99.89(513311)
C	143	F	L	L::99.61(514637)
C	144	F	P	P::99.81(518039)
C	145	F	E	E::99.81(514760)
C	146	F	T	T::99.85(522365)
C	147	F	T	T::98.75(520607)
C	148	F	V	V::99.82(530509)
C	149	F	V	V::99.85(531506)
C	150	F	R	R::99.86(528414)
C	151	F	R	R::99.83(531435)
C	152	F	R	R::99.83(536408)
C	153	F	G	G::99.83(548187)
C	154	F	R	R::99.79(551834)
C	155	F	S	S::99.68(554075)
C	156	F	P	P::99.83(564990)
C	157	F	R	R::99.87(567912)
C	158	F	R	R::99.86(573103)
C	159	F	R	R::99.84(582412)
C	160	F	T	T::99.90(593582)
C	161	F	P	P::99.84(609304)
C	162	F	S	S::99.88(608982)
C	163	F	P	P::99.89(624317)
C	164	F	R	R::99.71(633117)
C	165	F	R	R::99.82(647629)
C	166	F	R	R::99.85(655598)

C	167	F	R	R::99.70(648924)
C	168	F	S	S::99.81(673147)
C	169	F	Q	Q::99.67(685961)
C	170	F	S	S::99.86(693913)
C	171	F	P	P::99.69(703559)
C	172	F	R	R::99.80(709877)
C	173	F	R	R::99.54(716435)
C	174	F	R	R::99.69(723471)
C	175	F	R	R::99.86(737616)
C	176	F	S	S::99.84(743170)
C	177	F	Q	Q::99.57(751098)
C	178	F	S	S::99.83(756671)
C	179	F	R	R::99.80(768134)
C	180	F	E	E::98.91(765632)
C	181	F	S	S::99.80(775884)
C	182	F	Q	Q::98.94(782382)
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P1	1	F	M	M::99.87(504058)
P1	2	F	P	P::99.78(503515)
P1	3	F	L	L::99.88(504252)
P1	4	F	S	S::99.93(505521)
P1	5	F	Y	Y::99.88(506694)
P1	6	F	Q	Q::99.83(511736)
P1	7	F	H	H::99.67(515244)
P1	9	F	R	R::99.84(518757)
P1	10	F	R	R::99.56(515428)
P1	11	F	L	L::99.90(520618)
P1	12	F	L	L::99.92(526976)
P1	13	F	L	L::99.90(529535)
P1	14	F	L	L::99.92(523496)
P1	15	F	D	D::99.85(531155)
P1	16	F	D	D::99.79(537103)
P1	17	F	E	E::99.82(544111)
P1	18	F	A	A::99.74(545326)
P1	19	F	G	G::99.86(554223)
P1	20	F	P	P::99.85(559637)
P1	21	F	L	L::99.89(557485)
P1	22	F	E	E::99.90(564842)
P1	23	F	E	E::99.85(573270)
P1	24	F	E	E::99.83(583627)
P1	25	F	L	L::99.90(593957)
P1	26	F	P	P::99.89(611141)
P1	27	F	R	R::99.83(617455)
P1	28	F	L	L::99.90(627394)
P1	29	F	A	A::99.73(631931)
P1	30	F	D	D::99.87(654095)
P1	31	F	E	E::99.81(662383)
P1	32	F	G	G::99.59(648228)
P1	33	F	L	L::99.86(675672)
P1	34	F	N	N::99.88(693462)
P1	35	F	R	R::99.65(700049)
P1	36	F	R	R::99.82(708266)

P1	37	F	V	V::99.86(715274)
P1	38	F	A	A::99.66(707117)
P1	39	F	E	E::99.85(725459)
P1	40	F	D	D::99.80(739304)
P1	41	F	L	L::99.85(744133)
P1	42	F	N	N::99.84(759328)
P1	43	F	L	L::99.90(758706)
P1	44	F	G	G::99.81(770595)
P1	45	F	N	N::99.88(780154)
P1	46	F	L	L::99.77(777217)
P1	47	F	N	N::99.84(796545)
P1	48	F	V	V::99.84(800619)
P1	49	F	S	S::99.77(802794)
P1	50	F	I	I::99.91(807704)
P1	51	F	P	P::99.89(813514)
P1	52	F	W	W::99.81(809788)
P1	53	F	T	T::99.89(819561)
P1	54	F	H	H::99.88(825475)
P1	55	F	K	K::99.85(830843)
P1	56	F	V	V::99.91(835537)
P1	57	F	G	G::99.79(808308)
P1	58	F	N	N::99.91(838367)
P1	60	F	T	T::99.83(845526)
P1	61	F	G	G::99.89(844247)
P1	62	F	L	L::99.89(840951)
P1	63	F	Y	Y::99.88(840902)
P1	64	F	S	S::99.91(843831)
P1	65	F	S	S::99.90(838104)
P1	66	F	T	T::99.86(844284)
P1	67	F	V	V::99.86(809023)
P1	68	F	P	P::99.86(831907)
P1	69	F	V	V::99.82(833672)
P1	71	F	N	N::99.89(825582)
P1	72	F	P	P::99.85(821296)
P1	73	F	H	H::99.83(819556)
P1	74	F	W	W::99.80(811171)
P1	75	F	K	K::99.88(805609)
P1	76	F	T	T::99.88(802744)
P1	77	F	P	P::99.87(803524)
P1	78	F	S	S::99.84(794466)
P1	80	F	P	P::99.90(784129)
P1	81	F	N	N::99.83(744062)
P1	82	F	I	I::99.90(769929)
P1	83	F	H	H::99.87(772652)
P1	84	F	L	L::99.92(761199)
P1	85	F	H	H::99.79(759251)
P1	86	F	Q	Q::99.84(744082)
P1	87	F	D	D::99.86(746473)
P1	88	F	I	I::99.92(738235)
P1	89	F	I	I::99.90(727358)
P1	90	F	K	K::99.85(717637)

P1	91	F	K	K::99.79(715377)
P1	92	F	C	C::99.89(710155)
P1	93	F	E	E::99.83(700834)
P1	94	F	Q	Q::99.87(697060)
P1	96	F	V	V::99.90(680466)
P1	97	F	G	G::99.78(648035)
P1	98	F	P	P::99.86(668473)
P1	99	F	L	L::99.90(670051)
P1	100	F	T	T::99.86(657250)
P1	101	F	V	V::99.83(634244)
P1	102	F	N	N::99.89(658612)
P1	103	F	E	E::99.83(643132)
P1	104	F	K	K::99.91(631911)
P1	105	F	R	R::99.86(609912)
P1	106	F	R	R::99.87(635095)
P1	107	F	L	L::99.94(600972)
P1	108	F	Q	Q::88.05(545703) K::11.79(73083)
P1	109	F	L	L::99.89(600650)
P1	110	F	I	I::99.90(620930)
P1	111	F	M	M::99.74(624749)
P1	112	F	P	P::99.81(625283)
P1	113	F	A	A::99.84(622992)
P1	114	F	R	R::99.87(622464)
P1	116	F	Y	Y::99.87(616050)
P1	117	F	P	P::99.87(617645)
P1	118	F	N	N::99.30(587892)
P1	119	F	V	V::99.84(608655)
P1	120	F	T	T::99.90(612796)
P1	121	F	K	K::99.90(611056)
P1	122	F	Y	Y::99.93(607905)
P1	123	F	L	L::99.85(598200)
P1	124	F	P	P::99.78(595346)
P1	125	F	L	L::99.88(561778)
P1	126	F	D	D::99.84(577119)
P1	127	F	K	K::99.80(581561)
P1	128	F	G	G::99.87(578507)
P1	129	F	I	I::99.92(574743)
P1	130	F	K	K::99.91(567931)
P1	131	F	P	P::99.91(569870)
P1	132	F	Y	Y::99.90(560807)
P1	133	F	Y	Y::99.92(558032)
P1	134	F	P	P::99.88(553650)
P1	135	F	E	E::99.84(552953)
P1	136	F	H	H::99.89(551076)
P1	137	F	L	L::99.65(537530)
P1	138	F	V	V::99.88(541607)
P1	139	F	N	N::99.69(537519)
P1	140	F	H	H::99.88(534137)
P1	141	F	Y	Y::99.88(525448)
P1	143	F	Q	Q::99.84(516149)
P1	144	F	T	T::99.91(511948)

P1	145	F	R	R::99.85(506260)
P1	146	F	H	H::99.89(504791)
P1	147	F	Y	Y::99.90(498803)
P1	148	F	L	L::99.91(491958)
P1	149	F	H	H::99.83(490170)
P1	150	F	T	T::99.89(485415)
P1	151	F	L	L::99.92(476832)
P1	152	F	W	W::99.83(471600)
P1	153	F	K	K::99.86(465969)
P1	154	F	A	A::99.77(459119)
P1	155	F	G	G::99.83(454472)
P1	156	F	I	I::97.84(423411)
P1	157	F	L	L::99.89(437159)
P1	158	F	Y	Y::99.91(440470)
P1	159	F	K	K::99.84(431006)
P1	160	F	R	R::99.87(424387)
P1	161	F	E	E::99.87(421129)
P1	162	F	T	T::99.84(414822)
P1	163	F	T	T::99.90(410919)
P1	164	F	H	H::75.27(300524) R::24.63(98345)
P1	165	F	S	S::99.86(379668)
P1	166	F	A	A::99.88(393547)
P1	167	F	S	S::99.87(390269)
P1	169	F	C	C::99.82(381418)
P1	170	F	G	G::99.83(377759)
P1	171	F	S	S::99.83(370492)
P1	172	F	P	P::99.83(371024)
P1	173	F	Y	Y::99.89(368482)
P1	174	F	S	S::99.91(362116)
P1	175	F	W	W::99.82(353635)
P1	176	F	E	E::99.82(354447)
P1	177	F	Q	Q::99.86(345922)
P1	178	F	E	E::99.83(343767)
P1	179	F	L	L::99.62(336943)
P1	180	F	Q	Q::96.96(322404)
P1	181	F	H	H::99.80(328415)
P1	182	F	G	G::99.82(322316)
P1	183	F	A	A::99.72(312330)
P1	184	F	E	E::99.85(312092)
P1	185	F	S	S::99.91(307771)
P1	187	F	H	H::99.83(299622)
P1	188	F	Q	Q::99.82(294994)
P1	189	F	Q	Q::99.83(289473)
P1	190	F	S	S::99.89(286521)
P1	191	F	S	S::99.56(281334)
P1	192	F	G	G::99.87(280505)
P1	193	F	I	I::99.90(277208)
P1	194	F	L	L::99.82(270819)
P1	195	F	S	S::99.88(266616)
P1	196	F	R	R::99.79(262079)
P1	197	F	P	P::99.76(260020)

P1	198	F	P	P::99.82(258398)
P1	199	F	V	V::99.85(256592)
P1	200	F	G	G::99.88(252980)
P1	201	F	S	S::99.85(250492)
P1	202	F	S	S::99.83(247434)
P1	203	F	L	L::99.88(245387)
P1	204	F	Q	Q::99.81(240488)
P1	205	F	S	S::99.79(238251)
P1	206	F	K	K::99.85(234257)
P1	207	F	H	H::99.56(230821)
P1	208	F	R	R::99.49(227759)
P1	209	F	K	K::99.86(225007)
P1	210	F	S	S::99.84(222608)
P1	211	F	R	R::99.82(219902)
P1	212	F	L	L::99.89(218687)
P1	213	F	G	G::99.83(215853)
P1	214	F	L	L::99.85(213414)
P1	215	F	Q	Q::99.83(210448)
P1	216	F	S	S::99.88(208403)
P1	217	F	Q	Q::99.82(205501)
P1	218	F	Q	Q::99.75(202107)
P1	219	F	G	G::99.75(200531)
P1	220	F	H	H::98.83(196544)
P1	221	F	L	L::99.88(196641)
P1	222	F	A	A::99.67(192439)
P1	223	F	G	G::99.58(181238)
P1	224	F	R	R::99.56(188739)
P1	225	F	Q	Q::99.84(188832)
P1	226	F	Q	Q::99.82(186468)
P1	227	F	G	G::99.85(185219)
P1	228	F	R	R::99.82(183626)
P1	229	F	S	S::99.82(180756)
P1	230	F	W	W::99.67(178369)
P1	231	F	S	S::99.81(176819)
P1	232	F	I	I::99.83(176828)
P1	233	F	R	R::99.80(174655)
P1	234	F	A	A::99.61(164721)
P1	235	F	G	G::99.64(169752)
P1	236	F	I	I::99.81(171271)
P1	237	F	H	H::99.79(169914)
P1	238	F	P	P::99.79(170112)
P1	239	F	T	T::99.83(168352)
P1	240	F	A	A::99.59(161026)
P1	241	F	R	R::99.78(169539)
P1	242	F	R	R::99.83(170018)
P1	243	F	P	P::99.79(169130)
P1	245	F	G	G::99.82(169789)
P1	246	F	V	V::99.55(168658)
P1	247	F	E	E::99.46(167859)
P1	248	F	P	P::99.88(168935)
P1	249	F	S	S::99.74(168117)

P1	250	F	G	G::99.73(169867)
P1	251	F	S	S::99.83(168863)
P1	252	F	G	G::99.62(171492)
P1	253	F	H	H::99.80(168400)
P1	254	F	T	T::99.84(153175)
P1	255	F	T	T::99.79(153110)
P1	256	F	N	N::99.80(168610)
P1	258	F	A	A::99.65(176979)
P1	259	F	S	S::99.65(177495)
P1	260	F	K	K::97.97(174642)
P1	261	F	S	S::99.76(177823)
P1	262	F	A	A::99.62(180079)
P1	263	F	S	S::99.88(181978)
P1	264	F	C	C::99.64(181172)
P1	265	F	L	L::99.58(175258)
P1	266	F	H	H::99.64(184198)
P1	267	F	Q	Q::99.70(181005)
P1	268	F	S	S::99.84(178466)
P1	269	F	P	P::99.68(174872)
P1	270	F	V	V::99.81(170252)
P1	271	F	R	R::99.67(170010)
P1	272	F	K	K::99.77(165984)
P1	273	F	A	A::99.24(160366)
P1	274	F	A	A::99.54(158040)
P1	275	F	Y	Y::99.80(154304)
P1	276	F	P	P::99.53(151224)
P1	277	F	S	S::99.80(145823)
P1	278	F	V	V::99.83(145202)
P1	279	F	S	S::99.81(142778)
P1	280	F	T	T::99.78(139041)
P1	282	F	E	E::99.77(130943)
P1	283	F	K	K::99.81(128984)
P1	284	F	H	H::99.73(126412)
P1	285	F	S	S::99.77(122783)
P1	286	F	S	S::99.83(120785)
P1	287	F	S	S::99.87(116362)
P1	288	F	G	G::99.39(113450)
P1	289	F	H	H::99.83(110518)
P1	290	F	A	A::99.64(104606)
P1	291	F	V	V::99.89(101902)
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S1	1	F	M	M::99.79(326213)
S1	2	F	G	G::99.83(319740)
S1	3	F	Q	Q::99.81(312343)
S1	4	F	N	N::99.89(312215)
S1	5	F	L	L::99.89(305546)
S1	6	F	S	S::99.89(300921)
S1	7	F	T	T::99.87(298156)
S1	8	F	S	S::99.73(293303)
S1	9	F	N	N::99.85(289284)
S1	10	F	P	P::99.90(285802)
S1	11	F	L	L::99.89(280591)

S1	12	F	G	G::99.88(278630)
S1	15	F	P	P::99.86(266156)
S1	16	F	D	D::99.63(262113)
S1	17	F	H	H::99.87(260688)
S1	18	F	Q	Q::99.80(258085)
S1	19	F	L	L::99.90(254732)
S1	20	F	D	D::99.87(253293)
S1	21	F	P	P::99.85(248544)
S1	22	F	A	A::99.76(246778)
S1	24	F	R	R::99.79(239901)
S1	25	F	A	A::99.75(235018)
S1	26	F	N	N::99.88(234029)
S1	27	F	T	T::99.65(229699)
S1	28	F	A	A::99.62(225532)
S1	29	F	N	N::99.87(225021)
S1	30	F	P	P::99.84(220858)
S1	31	F	D	D::99.86(220324)
S1	32	F	W	W::99.75(217422)
S1	33	F	D	D::99.87(215910)
S1	35	F	N	N::99.86(210363)
S1	36	F	P	P::99.87(208285)
S1	37	F	N	N::99.78(205241)
S1	38	F	K	K::99.79(202735)
S1	39	F	D	D::99.80(200258)
S1	40	F	T	T::98.80(195986)
S1	41	F	W	W::99.70(194063)
S1	42	F	P	P::99.67(181676)
S1	43	F	D	D::99.70(187626)
S1	44	F	A	A::99.66(189086)
S1	45	F	N	N::99.83(189174)
S1	46	F	K	K::99.80(186602)
S1	47	F	V	V::99.90(183465)
S1	48	F	G	G::99.86(181946)
S1	49	F	A	A::99.82(180299)
S1	50	F	G	G::99.84(177990)
S1	51	F	A	A::99.85(176266)
S1	53	F	G	G::99.85(174003)
S1	54	F	L	L::99.46(164442)
S1	55	F	G	G::99.79(171123)
S1	57	F	T	T::99.76(169595)
S1	58	F	P	P::99.88(168927)
S1	59	F	P	P::99.82(161411)
S1	60	F	H	H::99.85(167742)
S1	61	F	G	G::99.82(169042)
S1	62	F	G	G::99.79(170298)
S1	63	F	L	L::99.36(168437)
S1	64	F	L	L::99.90(168428)
S1	65	F	G	G::99.83(169478)
S1	66	F	W	W::99.41(168025)
S1	67	F	S	S::99.72(168519)
S1	68	F	P	P::99.87(169228)

S1	69	F	Q	Q::99.76(169626)
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S1	71	F	Q	Q::99.76(171364)
S1	72	F	G	G::99.68(171191)
S1	73	F	I	I::99.87(167041)
S1	74	F	L	L::99.91(153276)
S1	75	F	Q	Q::99.72(166917)
S1	76	F	T	T::99.91(168784)
S1	77	F	L	L::99.87(174221)
S1	78	F	P	P::99.69(176365)
S1	79	F	A	A::99.62(176372)
S1	80	F	N	N::97.87(175143)
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S1	82	F	P	P::99.84(181529)
S1	83	F	P	P::99.86(183438)
S1	84	F	A	A::99.51(175110)
S1	85	F	S	S::99.72(182903)
S1	86	F	T	T::99.73(183705)
S1	87	F	N	N::99.72(180638)
S1	88	F	R	R::99.65(177338)
S1	89	F	Q	Q::99.75(174419)
S1	90	F	S	S::99.80(170242)
S1	91	F	G	G::99.78(167408)
S1	92	F	R	R::99.81(165269)
S1	93	F	Q	Q::99.33(159585)
S1	94	F	P	P::99.62(156197)
S1	95	F	T	T::99.82(153418)
S1	96	F	P	P::99.64(145586)
S1	97	F	L	L::99.84(145896)
S1	98	F	S	S::99.86(144320)
S1	99	F	P	P::99.86(140512)
S1	100	F	P	P::99.84(138137)
S1	101	F	L	L::99.86(135069)
S1	102	F	R	R::99.79(130448)
S1	103	F	N	N::99.78(128510)
S1	104	F	T	T::99.67(124999)
S1	105	F	H	H::99.80(122136)
S1	106	F	P	P::99.84(119574)
S1	107	F	Q	Q::99.41(115169)
S1	108	F	A	A::99.68(112944)
S1	109	F	M	M::99.70(109235)
S1	110	F	Q	Q::99.70(103833)

Meta data	
Assembly file:	HBV-RYD-3.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-3
Date/Time	Fri 22 Mar 15:52:40 GMT 2019