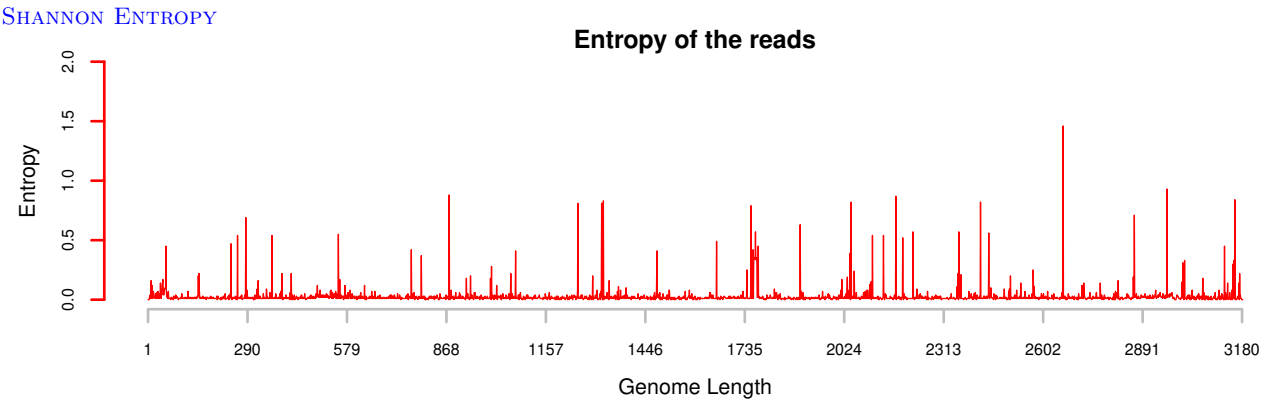
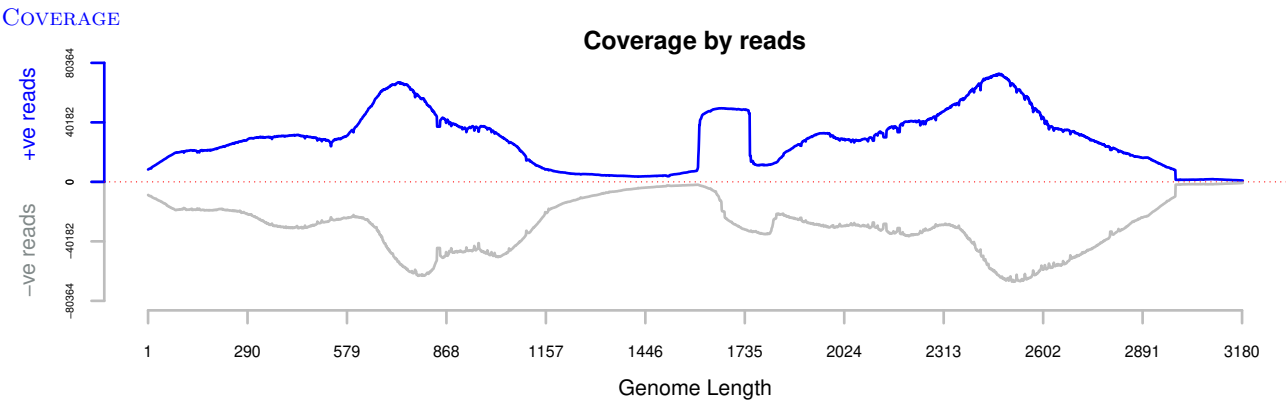


HBV-RYD-2

File name	HBV-RYD-2.sam
Ref name	KX357637.1 Hepatitis B virus isolate MK20ETH, complete genome
Ref len	3182
Program used	Tanoti Assembler 1.0
Total reads	1457638
Mapped reads	1239412 (85.03%)
Unmapped reads	218226
Mapped loan pairs	3665
Average read length	148nt
Coverage	3182nt (100.00%)
Average depth	57271 reads/site
Average insert length	356nt



# CONSENSUS SEQUENCE

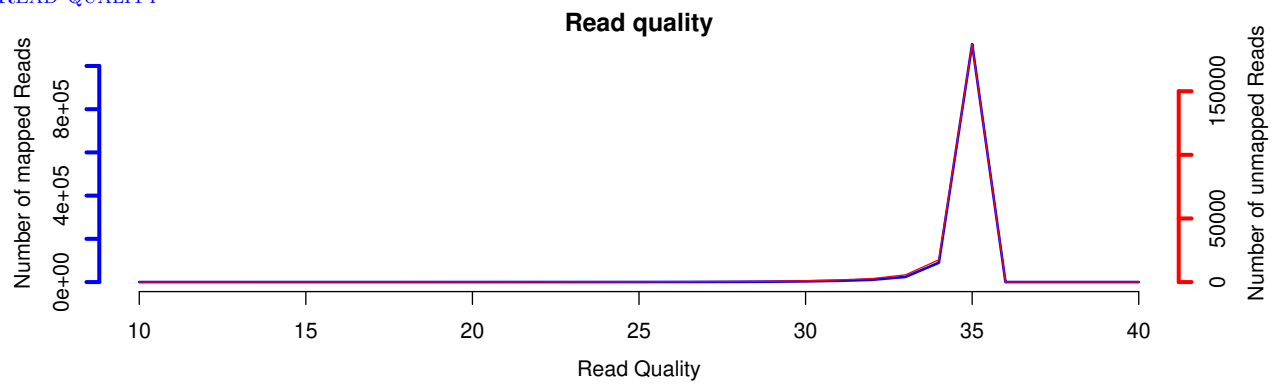
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140    ACCCTGCGCG GAACATGGAG AACATCACAT CAGGATTCCCT AGGACCCCTG CTCGTGTTAC AGGCGGGGTT
210    TTTCTTGTG ACAAGAATCC TCACAATACC GCAGAGTCTA GACTCGTGGT GGACTTCTCT CAATTTTCTA
280    GGGGGAAC TA CCGTGTGTCT TGGCCAAAAT TCGCAGTCCC CAACCTCCAA TCACTACCA ACCTCCTGTC
350    CTCCAAC TTG ACCTGGTTAT CGCTGGATGT GTCTGCGGCG TTTTATCATC TTCCTCTTCA TCCTGCTGCT
420    ATGCTCATC TTCTTGTG TTTCTCTGGA CTATCAAGGT ATGTTGCCCC TTTGTCCTCT AATTCCAGGA
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1120   TGTGTAAACA ATACCTGAAC CTTTACCCCG TTGCCCGGCA ACGGCCAGGT CTGTGCCAAG TGTTTGTGTA
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1260   CCGATCCATA CTGCGGAACCT CCTAGCCGCT TGTTTTGTCT GCAGCAGGTC TGGAGCAAGC ATTATCGGGA
1330   CTGATAATC AGTTGTCTCT TCCCGCAAAT ATACATCGTT TCCATGGCTG CTAGGCTGTG CTGCCAATG
1400   GATCCTGCGC GGGACGCTCT TTGTCTACGT CCCGTGCGCG CTGAATCCCG CGGACGACCC TTCTCGGGGC
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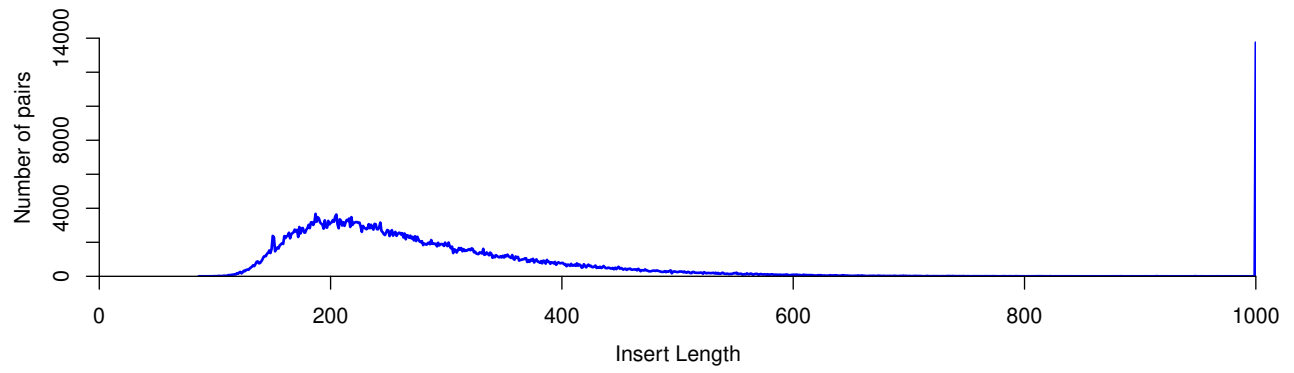
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Genome Composition	
A	723 (22.72%)
T	904 (28.41%)
G	695 (21.84%)
C	860 (27.03%)
N	0 (0.00%)
Total Nucleotides	3182
GC%	48.87

### READ QUALITY



### INSERT LENGTH DISTRIBUTION



AMINO ACID VARIATIONS

Protein	Position	Ref AA	Consensus AA	All AAs
P2	1	F	H	H::99.78(18042)
P2	2	F	N	N::99.39(18485)
P2	4	F	P	P::98.36(20148)
P2	5	F	P	P::98.54(20902)
P2	6	F	N	N::99.68(21904)
P2	7	F	S	S::99.48(22426)
P2	8	F	A	A::99.10(23281)
P2	9	F	R	R::98.73(24060)
P2	10	F	S	S::99.78(24946)
P2	11	F	Q	Q::99.30(25710)
P2	12	F	S	S::97.65(25960)
P2	13	F	E	E::98.84(27073)
P2	14	F	R	R::97.46(27422)
P2	15	F	P	P::99.80(29057)
P2	16	F	V	V::99.49(29566)
P2	17	F	F	F::92.22(28014) S::7.17(2178)
P2	18	F	P	P::99.70(31812)
P2	19	F	C	C::99.87(32700)
P2	20	F	W	W::99.79(33628)
P2	21	F	W	W::99.80(34342)
P2	22	F	L	L::99.84(35077)
P2	23	F	Q	Q::99.82(35987)
P2	25	F	R	R::99.80(37403)
P2	26	F	N	N::99.75(38273)
P2	27	F	S	S::99.60(38186)
P2	28	F	K	K::99.62(38080)
P2	29	F	P	P::99.90(38204)
P2	30	F	C	C::99.81(37919)
P2	31	F	S	S::99.89(38096)
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P2	34	F	C	C::99.80(37223)
P2	35	F	L	L::99.87(38327)
P2	36	F	S	S::99.87(38292)
P2	37	F	H	H::99.79(39184)
P2	38	F	I	I::99.89(39410)
P2	39	F	V	V::99.75(39371)
P2	40	F	N	N::99.80(39592)
P2	41	F	L	L::99.90(39349)
P2	42	F	L	L::99.89(38924)
P2	43	F	E	E::99.79(39478)
P2	44	F	D	D::99.80(39528)
P2	45	F	W	W::99.73(39231)
P2	46	F	G	G::99.79(39294)
P2	47	F	P	P::99.84(37748)
P2	48	F	C	C::99.71(38573)

P2	49	F	A	A::96.32(36497)
P2	50	F	E	E::99.78(39469)
P2	51	F	H	H::99.85(39834)
P2	52	F	G	G::99.80(39229)
P2	53	F	E	E::99.59(39287)
P2	54	F	H	H::99.90(39856)
P2	55	F	H	H::99.70(39977)
P2	56	F	I	I::99.85(40047)
P2	57	F	R	R::99.76(39941)
P2	58	F	I	I::99.90(40159)
P2	59	F	P	P::99.90(40050)
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P2	75	F	N	N::99.92(42882)
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P2	109	F	Q	Q::99.86(55122)
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P2	140	F	M	M::99.79(61778)
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P2	151	F	S	S::99.86(60652)
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P2	157	F	L	L::99.83(58849)
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P2	167	F	Q	Q::99.71(55503)
P2	168	F	H	H::99.70(53205)
P2	169	F	G	G::99.47(55096)
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P2	187	F	L	L::99.66(53116)
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P2	227	F	S	S::99.85(99504)
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P2	229	F	I	I::99.83(103152)
P2	230	F	C	C::99.81(103620)
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P2	253	F	A	A::99.65(122920)
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P2	255	F	S	S::91.35(111197) T::8.55(10403)
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P2	264	F	T	T::99.81(117395)

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P2	301	F	S	S::99.79(82173)
P2	302	F	L	L::99.87(82493)
P2	303	F	P	P::99.85(82327)
P2	304	F	Q	Q::99.86(81464)
P2	305	F	D	D::99.69(82120)
P2	306	F	H	H::99.83(82567)
P2	307	F	I	I::99.86(82564)
P2	308	F	I	I::97.50(75836)
P2	309	F	Q	Q::99.72(80958)
P2	310	F	K	K::99.83(81444)
P2	311	F	I	I::99.74(81982)
P2	312	F	K	K::96.90(79126)
P2	313	F	E	E::99.48(82030)
P2	314	F	C	C::99.89(82583)
P2	316	F	R	R::99.51(77427)
P2	317	F	K	K::99.69(82064)
P2	318	F	L	L::99.90(81982)

P2	319	F	P	P::99.89(80437)
P2	320	F	C	C::99.77(75078)
P2	321	F	N	N::99.85(81704)
P2	322	F	R	R::99.89(83369)
P2	323	F	P	P::99.81(83558)
P2	324	F	I	I::99.77(83713)
P2	325	F	D	D::99.70(84072)
P2	326	F	W	W::99.60(83390)
P2	327	F	K	K::99.81(84040)
P2	328	F	V	V::99.89(81413)
P2	329	F	C	C::99.79(82687)
P2	330	F	Q	Q::99.87(84007)
P2	331	F	R	R::99.65(83920)
P2	332	F	I	I::99.89(80847)
P2	333	F	V	V::99.82(83010)
P2	334	F	G	G::99.85(83271)
P2	335	F	L	L::99.88(80372)
P2	336	F	L	L::99.87(82173)
P2	337	F	G	G::99.85(82584)
P2	339	F	A	A::99.44(81409)
P2	340	F	A	A::99.65(80615)
P2	341	F	P	P::99.89(80774)
P2	343	F	T	T::99.75(78502)
P2	344	F	Q	Q::99.77(77645)
P2	345	F	C	C::99.82(76886)
P2	346	F	G	G::99.87(76032)
P2	347	F	Y	Y::99.85(74987)
P2	348	F	P	P::99.85(74827)
P2	349	F	A	A::99.63(70877)
P2	350	F	L	L::99.93(72001)
P2	351	F	M	M::96.24(69207)
P2	352	F	P	P::99.78(70818)
P2	353	F	L	L::99.83(69445)
P2	354	F	Y	Y::99.78(68356)
P2	355	F	A	A::99.69(67367)
P2	356	F	C	C::91.75(60797) S::8.01(5310)
P2	357	F	I	I::99.84(65590)
P2	358	F	Q	Q::99.45(63543)
P2	359	F	S	S::99.86(62335)
P2	360	F	K	K::99.68(60842)
P2	361	F	Q	Q::99.76(59452)
P2	362	F	A	A::99.85(58434)
P2	364	F	T	T::99.80(55540)
P2	366	F	S	S::99.89(47410)
P2	367	F	P	P::99.85(48788)
P2	368	F	T	T::99.78(49201)
P2	369	F	Y	Y::99.88(48079)
P2	370	F	K	K::99.74(46647)
P2	371	F	A	A::99.81(45518)
P2	373	F	L	L::99.92(42636)
P2	374	F	C	C::99.58(41589)

P2	375	F	K	K::99.32(40225)
P2	376	F	Q	Q::99.85(39255)
P2	377	F	Y	Y::99.84(38273)
P2	378	F	L	L::99.73(37159)
P2	379	F	N	N::99.35(35934)
P2	380	F	L	L::99.87(34924)
P2	381	F	Y	Y::99.89(33390)
P2	382	F	P	P::99.92(32465)
P2	383	F	V	V::99.83(31542)
P2	384	F	A	A::99.83(28603)
P2	385	F	R	R::99.84(29194)
P2	386	F	Q	Q::99.76(28709)
P2	387	F	R	R::99.77(27766)
P2	388	F	P	P::99.73(25847)
P2	389	F	G	G::99.87(26359)
P2	390	F	L	L::99.90(25524)
P2	391	F	C	C::99.84(24890)
P2	392	F	Q	Q::99.78(24544)
P2	393	F	V	V::99.86(24291)
P2	395	F	A	A::99.63(23419)
P2	396	F	D	D::99.88(22982)
P2	397	F	A	A::99.65(22167)
P2	398	F	T	T::99.94(22011)
P2	399	F	P	P::99.92(21518)
P2	400	F	T	T::99.76(21194)
P2	401	F	G	G::99.68(20814)
P2	402	F	W	W::99.65(20274)
P2	403	F	G	G::99.76(20164)
P2	404	F	L	L::99.93(19793)
P2	405	F	V	V::99.79(19451)
P2	406	F	M	M::99.62(19149)
P2	407	F	G	G::99.59(18931)
P2	408	F	H	H::99.63(18791)
P2	409	F	Q	Q::99.76(18354)
P2	410	F	R	R::99.50(18032)
P2	411	F	M	M::99.77(17882)
P2	412	F	R	R::99.56(17518)
P2	413	F	G	G::99.74(17388)
P2	414	F	T	T::99.69(17254)
P2	416	F	L	L::83.38(13873) P::11.76(1956)
P2	417	F	A	A::99.80(16578)
P2	418	F	P	P::99.88(16229)
P2	419	F	L	L::99.92(15422)
P2	420	F	P	P::99.68(15914)
P2	421	F	I	I::99.83(15836)
P2	422	F	H	H::99.84(15680)
P2	423	F	T	T::99.68(15531)
P2	424	F	A	A::99.71(15318)
P2	425	F	E	E::99.79(15162)
P2	426	F	L	L::99.88(15022)
P2	427	F	L	L::99.86(14778)

P2	428	F	A	A::99.90(14634)
P2	429	F	A	A::99.77(14502)
P2	430	F	C	C::99.88(14214)
P2	432	F	A	A::99.70(13856)
P2	433	F	R	R::99.55(13684)
P2	434	F	S	S::99.77(13560)
P2	435	F	R	R::99.67(13407)
P2	436	F	S	S::99.92(13182)
P2	437	F	G	G::99.81(12898)
P2	438	F	A	A::99.77(12618)
P2	439	F	S	S::75.56(9183) N::23.94(2910)
P2	440	F	I	I::99.52(12297)
P2	441	F	I	I::75.91(8968) L::23.69(2799)
P2	442	F	G	G::99.81(11968)
P2	443	F	T	T::99.89(11317)
P2	444	F	D	D::99.78(11539)
P2	445	F	N	N::99.84(11621)
P2	446	F	S	S::99.90(10787)
P2	447	F	V	V::99.82(11036)
P2	448	F	V	V::99.70(11021)
P2	449	F	L	L::99.85(10817)
P2	450	F	S	S::99.85(10659)
P2	451	F	R	R::99.59(10607)
P2	452	F	K	K::99.48(10501)
P2	453	F	Y	Y::99.70(10411)
P2	454	F	T	T::99.75(10257)
P2	455	F	S	S::99.91(10099)
P2	457	F	P	P::99.88(9900)
P2	458	F	W	W::99.63(9709)
P2	459	F	L	L::99.91(9581)
P2	460	F	L	L::99.86(9350)
P2	461	F	G	G::99.69(9300)
P2	462	F	C	C::99.81(9124)
P2	463	F	A	A::98.61(8914)
P2	464	F	A	A::99.41(8901)
P2	465	F	N	N::99.70(8873)
P2	466	F	W	W::99.76(8698)
P2	467	F	I	I::99.83(8657)
P2	468	F	L	L::99.94(8521)
P2	469	F	R	R::99.73(8376)
P2	470	F	G	G::99.87(8240)
P2	471	F	T	T::99.84(8119)
P2	472	F	S	S::99.89(8080)
P2	474	F	V	V::99.73(7474)
P2	475	F	Y	Y::99.75(7676)
P2	476	F	V	V::99.90(7768)
P2	477	F	P	P::99.86(7649)
P2	478	F	S	S::99.72(7564)
P2	479	F	A	A::99.80(7597)
P2	480	F	L	L::99.63(7548)
P2	481	F	N	N::99.82(7582)

P2	482	F	P	P::99.87(7525)
P2	483	F	A	A::99.66(7420)
P2	484	F	D	D::99.87(7475)
P2	485	F	D	D::99.83(7423)
P2	486	F	P	P::99.92(7423)
P2	487	F	S	S::99.97(7421)
P2	488	F	R	R::99.87(7412)
P2	489	F	G	G::99.84(7379)
P2	490	F	R	R::99.51(7312)
P2	491	F	L	L::99.86(7324)
P2	492	F	G	G::99.83(6978)
P2	493	F	L	L::93.22(6707) I::5.00(360)
P2	494	F	S	S::99.63(7219)
P2	495	F	R	R::99.63(7193)
P2	496	F	P	P::99.94(7212)
P2	497	F	L	L::99.88(7195)
P2	498	F	L	L::99.90(6859)
P2	499	F	R	R::99.49(7079)
P2	500	F	L	L::99.90(7167)
P2	501	F	P	P::99.79(7102)
P2	503	F	R	R::99.71(6237)
P2	504	F	P	P::99.92(6256)
P2	505	F	T	T::99.11(6984)
P2	506	F	T	T::99.88(7276)
P2	507	F	G	G::99.93(7402)
P2	508	F	R	R::99.68(7408)
P2	509	F	T	T::99.92(7587)
P2	510	F	S	S::99.84(7604)
P2	511	F	L	L::99.97(7667)
P2	512	F	Y	Y::99.88(7701)
P2	513	F	A	A::99.71(7789)
P2	514	F	D	D::99.67(7825)
P2	515	F	S	S::99.75(7862)
P2	516	F	P	P::99.94(8033)
P2	517	F	S	S::99.79(8165)
P2	518	F	V	V::99.81(8291)
P2	519	F	P	P::99.74(8382)
P2	520	F	S	S::99.00(8343)
P2	521	F	H	H::99.87(8475)
P2	522	F	L	L::99.94(8534)
P2	523	F	P	P::99.71(8665)
P2	524	F	D	D::98.86(8792)
P2	525	F	R	R::99.61(8932)
P2	526	F	V	V::99.80(9024)
P2	527	F	H	H::99.79(9086)
P2	529	F	A	A::99.75(9115)
P2	530	F	S	S::99.88(9122)
P2	531	F	P	P::99.91(9314)
P2	532	F	L	L::99.94(10258)
P2	533	F	H	H::99.82(19008)
P2	534	F	V	V::99.94(40575)

P2	535	F	A	A::99.85(44512)
P2	536	F	W	W::99.81(46047)
P2	537	F	R	R::99.81(47897)
P2	538	F	P	P::99.84(48695)
S2	1	F	S	S::100.00(17345)
S2	2	F	T	T::99.54(18230)
S2	3	F	T	T::99.74(18559)
S2	5	F	H	H::99.49(20647)
S2	6	F	Q	Q::98.97(21273)
S2	7	F	T	T::99.82(22201)
S2	8	F	L	L::99.92(22704)
S2	9	F	Q	Q::99.14(23523)
S2	10	F	D	D::98.72(24225)
S2	11	F	P	P::99.67(25290)
S2	12	F	R	R::98.98(25871)
S2	13	F	V	V::99.43(26710)
S2	14	F	R	R::97.51(26889)
S2	15	F	G	G::97.35(27858)
S2	16	F	L	L::99.57(29031)
S2	17	F	Y	Y::99.16(29600)
S2	18	F	F	F::92.46(28233) L::7.16(2186)
S2	19	F	P	P::99.24(32189)
S2	20	F	A	A::99.16(33024)
S2	21	F	G	G::99.86(34036)
S2	22	F	G	G::99.84(34740)
S2	23	F	S	S::99.75(35212)
S2	24	F	S	S::99.78(36214)
S2	25	F	S	S::99.71(36649)
S2	26	F	G	G::99.73(37679)
S2	27	F	T	T::99.40(38006)
S2	28	F	V	V::99.41(37943)
S2	29	F	N	N::99.69(38165)
S2	30	F	P	P::99.87(38211)
S2	31	F	V	V::99.85(38270)
S2	32	F	P	P::99.81(38062)
S2	33	F	T	T::99.45(38158)
S2	34	F	T	T::99.74(38576)
S2	35	F	V	V::99.85(37239)
S2	36	F	S	S::99.74(38393)
S2	37	F	P	P::99.76(39056)
S2	38	F	I	I::99.85(39163)
S2	39	F	S	S::99.17(38961)
S2	40	F	S	S::99.82(39175)
S2	41	F	I	I::99.82(39536)
S2	43	F	S	S::99.73(38500)
S2	44	F	R	R::99.83(39514)
S2	45	F	I	I::99.70(39306)
S2	46	F	G	G::99.77(39443)
S2	47	F	D	D::99.82(39470)
S2	48	F	P	P::99.70(37690)
S2	49	F	A	A::96.89(37962)

S2	50	F	R	R::98.93(37486)
S2	51	F	N	N::99.81(39811)
S2	52	F	M	M::99.71(39776)
S2	53	F	E	E::99.71(39319)
S2	54	F	N	N::99.76(39599)
S2	55	F	I	I::99.89(39986)
S2	56	F	T	T::99.74(39783)
S2	57	F	S	S::99.76(39619)
S2	58	F	G	G::99.66(39821)
S2	60	F	L	L::99.83(39675)
S2	61	F	G	G::99.62(39864)
S2	62	F	P	P::99.80(39971)
S2	63	F	L	L::99.88(40188)
S2	64	F	L	L::99.77(40380)
S2	65	F	V	V::99.84(40543)
S2	66	F	L	L::99.86(40436)
S2	67	F	Q	Q::99.62(40491)
S2	68	F	A	A::99.73(40644)
S2	69	F	G	G::99.87(40744)
S2	72	F	L	L::99.73(41008)
S2	73	F	L	L::99.83(41705)
S2	74	F	T	T::99.83(41876)
S2	75	F	R	R::99.39(42212)
S2	76	F	I	I::99.92(42970)
S2	77	F	L	L::99.82(43052)
S2	78	F	T	T::99.62(43033)
S2	79	F	I	I::99.55(43656)
S2	80	F	P	P::99.50(43826)
S2	81	F	Q	Q::89.57(39442) K::10.15(4471)
S2	82	F	S	S::99.72(44869)
S2	83	F	L	L::99.78(44191)
S2	84	F	D	D::99.75(45253)
S2	85	F	S	S::99.69(45007)
S2	86	F	W	W::99.79(45525)
S2	87	F	W	W::87.45(39899) *:12.44(5674)
S2	88	F	T	T::99.82(46285)
S2	89	F	S	S::99.82(46308)
S2	90	F	L	L::99.64(46579)
S2	91	F	N	N::99.53(47573)
S2	93	F	L	L::99.87(47388)
S2	94	F	G	G::99.52(48146)
S2	95	F	G	G::81.73(39494) E::17.94(8669)
S2	96	F	T	T::99.86(49210)
S2	97	F	T	T::99.77(50052)
S2	98	F	V	V::99.76(50438)
S2	99	F	C	C::99.71(50678)
S2	100	F	L	L::99.90(50810)
S2	101	F	G	G::99.71(51434)
S2	102	F	Q	Q::99.72(51516)
S2	103	F	N	N::99.79(52383)
S2	104	F	S	S::99.63(51989)



	S2	105	F	Q	Q::99.70(52922)
	S2	106	F	S	S::98.92(52793)
	S2	107	F	P	P::97.74(52511)
	S2	108	F	T	T::99.65(54530)
	S2	109	F	S	S::99.61(54712)
	S2	110	F	N	N::99.84(55399)
	S2	111	F	H	H::99.86(55893)
	S2	112	F	S	S::99.43(55011)
	S2	113	F	P	P::99.78(55960)
	S2	114	F	T	T::99.90(56858)
	S2	115	F	S	S::98.73(56331)
	S2	116	F	C	C::99.71(57164)
S2	117	F	P		P::99.84(58006)
S2	118	F	P		P::99.80(57902)
S2	119	F	T		T::99.79(58587)
S2	120	F	*		*::87.92(50018) C::11.95(6801) temp3:variations temp1:temp2 quality.
S2	121	F	P		P::99.80(58825)
S2	122	F	G		G::99.88(59329)
S2	123	F	Y		Y::99.78(59246)
S2	124	F	R		R::99.34(58954)
S2	125	F	W		W::99.74(59387)
S2	126	F	M		M::99.82(59899)
S2	127	F	C		C::99.74(60151)
S2	128	F	L		L::99.41(59696)
S2	129	F	R		R::99.02(59747)
S2	130	F	R		R::96.38(58227)
S2	132	F	I		I::99.77(60756)
S2	133	F	I		I::99.82(60645)
S2	135	F	L		L::99.85(61204)
S2	137	F	I		I::99.90(61644)
S2	138	F	L		L::99.35(61047)
S2	139	F	L		L::97.11(59680)
S2	140	F	L		L::99.65(61432)
S2	141	F	C		C::99.82(61574)
S2	142	F	L		L::99.56(61624)
S2	143	F	I		I::99.92(61552)
S2	145	F	L		L::99.81(60400)
S2	146	F	L		L::99.75(61709)
S2	147	F	V		V::99.82(61805)
S2	148	F	L		L::99.68(61005)
S2	149	F	L		L::99.64(60532)
S2	150	F	D		D::99.72(61293)
S2	151	F	Y		Y::99.71(60999)
S2	152	F	Q		Q::99.37(58518)
S2	153	F	G		G::99.87(60757)
S2	154	F	M		M::99.80(60648)
S2	155	F	L		L::99.69(59991)
S2	156	F	P		P::99.77(59807)
S2	157	F	V		V::99.65(59546)
S2	158	F	C		C::99.51(58623)
S2	159	F	P		P::99.62(58787)

S2	160	F	L	L::99.87(57910)
S2	161	F	I	I::99.79(58577)
S2	162	F	P	P::99.79(57888)
S2	163	F	G	G::99.46(57350)
S2	164	F	S	S::99.20(54198)
S2	165	F	S	S::99.38(55530)
S2	166	F	T	T::99.52(55935)
S2	167	F	T	T::98.96(55391)
S2	168	F	S	S::99.55(55221)
S2	169	F	T	T::99.57(53138)
S2	170	F	G	G::99.60(55036)
S2	171	F	P	P::99.42(54566)
S2	172	F	C	C::99.44(54693)
S2	173	F	R	R::99.25(53953)
S2	174	F	T	T::99.38(54232)
S2	175	F	C	C::99.50(53553)
S2	176	F	T	T::99.73(52771)
S2	177	F	T	T::98.87(47478)
S2	178	F	P	P::98.95(47512)
S2	179	F	A	A::99.19(51956)
S2	180	F	Q	Q::99.47(52894)
S2	181	F	G	G::99.00(52627)
S2	182	F	T	T::99.14(53162)
S2	183	F	S	S::99.42(53021)
S2	184	F	M	M::99.68(53358)
S2	185	F	Y	Y::90.26(48182) N::5.37(2868)
S2	186	F	P	P::97.50(52224)
S2	187	F	S	S::99.61(53187)
S2	188	F	C	C::99.54(53225)
S2	189	F	C	C::99.61(53398)
S2	190	F	C	C::99.61(53521)
S2	191	F	T	T::98.36(53140)
S2	192	F	K	K::99.68(54181)
S2	193	F	P	P::99.48(54469)
S2	194	F	S	S::99.30(54297)
S2	195	F	D	D::99.40(55568)
S2	196	F	G	G::98.66(55617)
S2	197	F	N	N::99.78(57365)
S2	198	F	C	C::99.32(57167)
S2	199	F	T	T::99.67(55603)
S2	200	F	C	C::99.51(58094)
S2	201	F	I	I::99.91(59693)
S2	202	F	P	P::99.66(59780)
S2	203	F	I	I::99.86(61018)
S2	204	F	P	P::99.68(61665)
S2	205	F	S	S::99.64(62560)
S2	206	F	S	S::99.52(64035)
S2	207	F	W	W::99.64(65227)
S2	208	F	A	A::99.53(66390)
S2	210	F	G	G::98.53(67918)
S2	211	F	K	K::99.69(70389)

S2	213	F	L	L::99.88(72734)
S2	214	F	W	W::99.75(74438)
S2	215	F	E	E::99.59(76253)
S2	216	F	W	W::99.68(77473)
S2	217	F	A	A::99.17(78288)
S2	218	F	S	S::99.66(79470)
S2	219	F	A	A::99.71(82360)
S2	220	F	R	R::99.20(83949)
S2	222	F	S	S::99.79(86784)
S2	223	F	W	W::99.29(88988)
S2	224	F	L	L::99.69(91550)
S2	225	F	S	S::99.49(94009)
S2	226	F	L	L::99.83(95478)
S2	227	F	L	L::99.78(97326)
S2	228	F	V	V::99.86(100801)
S2	229	F	P	P::99.74(101927)
S2	231	F	V	V::99.70(105293)
S2	232	F	Q	Q::99.67(106192)
S2	233	F	W	W::99.64(107424)
S2	235	F	V	V::99.52(110166)
S2	236	F	G	G::99.53(111985)
S2	237	F	L	L::99.64(112645)
S2	238	F	S	S::99.63(113189)
S2	239	F	P	P::99.51(114960)
S2	240	F	T	T::99.82(116272)
S2	241	F	V	V::99.90(117891)
S2	242	F	W	W::99.23(117558)
S2	243	F	L	L::99.85(119947)
S2	244	F	S	S::99.54(119078)
S2	245	F	V	V::99.83(121308)
S2	246	F	I	I::99.79(121113)
S2	247	F	W	W::99.80(121311)
S2	248	F	M	M::99.75(122018)
S2	249	F	M	M::99.77(121993)
S2	250	F	W	W::99.59(121988)
S2	251	F	Y	Y::99.52(122600)
S2	252	F	W	W::99.48(122374)
S2	253	F	G	G::99.78(122939)
S2	254	F	P	P::99.66(121447)
S2	255	F	S	S::91.11(111644) R::8.35(10228)
S2	256	F	L	L::99.85(121181)
S2	257	F	Y	Y::99.17(120682)
S2	258	F	S	S::99.29(120425)
S2	259	F	I	I::99.79(116207)
S2	260	F	L	L::99.66(118721)
S2	261	F	S	S::99.72(120291)
S2	262	F	P	P::99.79(120127)
S2	264	F	L	L::99.64(117275)
S2	265	F	P	P::93.10(109273) L::6.71(7878)
S2	266	F	L	L::99.84(117733)
S2	267	F	L	L::99.64(116736)

S2	268	F	P	P::99.67(115902)
S2	269	F	I	I::99.85(115834)
S2	272	F	C	C::99.76(111284)
S2	273	F	L	L::99.68(110461)
S2	274	F	W	W::99.60(108755)
S2	275	F	V	V::99.62(106548)
S2	276	F	Y	Y::99.74(105490)

X	1	F	M	M::99.04(9781)
X	2	F	A	A::99.73(9689)
X	3	F	A	A::99.56(9463)
X	4	F	R	R::99.71(9312)
X	5	F	L	L::99.58(9187)
X	6	F	C	C::98.68(8937)
X	7	F	C	C::99.42(8872)
X	8	F	Q	Q::99.61(8838)
X	9	F	L	L::99.90(8802)
X	10	F	D	D::99.81(8703)
X	11	F	P	P::99.93(8615)
X	12	F	A	A::99.54(8407)
X	13	F	R	R::99.88(8308)
X	14	F	D	D::99.66(8164)
X	15	F	V	V::99.69(8088)
X	16	F	L	L::99.80(8062)
X	17	F	C	C::99.75(7867)
X	18	F	L	L::99.80(7478)
X	19	F	R	R::99.82(7740)
X	20	F	P	P::99.80(7677)
X	21	F	V	V::99.56(7615)
X	22	F	G	G::99.76(7591)
X	23	F	A	A::99.51(7566)
X	24	F	E	E::99.51(7559)
X	25	F	S	S::99.84(7523)
X	26	F	R	R::99.62(7434)
X	27	F	G	G::99.79(7439)
X	28	F	R	R::99.80(7366)
X	29	F	P	P::99.88(7435)
X	31	F	S	S::99.92(7344)
X	32	F	G	G::99.80(7388)
X	33	F	P	P::99.67(7328)
X	34	F	L	L::99.27(7304)
X	35	F	G	G::99.75(7231)
X	36	F	A	A::89.90(6284) D::5.15(360)
X	37	F	L	L::99.24(7210)
X	38	F	S	S::99.79(7167)
X	39	F	S	S::99.36(7168)
X	40	F	P	P::99.82(7230)
X	41	F	S	S::99.76(7108)
X	42	F	A	A::99.33(6820)
X	43	F	S	S::99.74(7180)
X	44	F	A	A::99.71(7162)
X	45	F	V	V::99.82(7022)

X	46	F	P	P::99.54(6229)
X	47	F	P	P::99.65(6234)
X	48	F	N	N::98.18(6151)
X	49	F	H	H::99.82(7214)
X	50	F	G	G::99.76(7368)
X	51	F	A	A::99.88(7394)
X	52	F	H	H::99.83(7534)
X	53	F	L	L::99.80(7627)
X	54	F	S	S::99.92(7631)
X	55	F	L	L::99.84(7659)
X	56	F	R	R::99.73(7754)
X	57	F	G	G::99.85(7822)
X	58	F	L	L::99.78(7832)
X	59	F	P	P::99.84(8014)
X	60	F	V	V::99.82(8145)
X	61	F	C	C::99.73(8147)
X	62	F	A	A::99.48(8343)
X	64	F	S	S::99.86(8415)
X	65	F	S	S::99.96(8511)
X	66	F	A	A::99.71(8624)
X	67	F	G	G::99.50(8789)
X	68	F	P	P::99.87(8914)
X	69	F	C	C::99.71(8951)
X	70	F	A	A::99.33(8986)
X	71	F	L	L::99.92(9151)
X	72	F	R	R::99.59(9043)
X	74	F	T	T::99.85(9249)
X	75	F	S	S::99.93(9426)
X	76	F	A	A::99.76(11659)
X	77	F	R	R::99.87(31122)
X	78	F	R	R::99.76(43828)
X	79	F	M	M::99.85(45276)
X	80	F	E	E::99.84(47488)
X	81	F	T	T::99.84(48539)
X	82	F	T	T::99.87(49024)
X	83	F	V	V::99.70(49831)
X	84	F	N	N::99.87(50335)
X	85	F	A	A::99.74(51035)
X	86	F	H	H::99.76(51765)
X	87	F	Q	Q::99.09(51635)
X	88	F	V	V::99.28(51567)
X	89	F	L	L::99.88(53050)
X	90	F	P	P::99.55(54004)
X	91	F	K	K::99.84(54706)
X	92	F	V	V::99.90(55400)
X	93	F	L	L::99.86(55431)
X	94	F	H	H::89.57(51216) Y::10.25(5861)
X	95	F	K	K::99.87(58402)
X	96	F	R	R::99.79(59294)
X	97	F	T	T::99.93(61792)
X	98	F	L	L::99.65(62218)

X	99	F	G	G::99.74(67972)
X	100	F	L	L::99.86(69380)
X	101	F	S	S::99.59(69128)
X	102	F	V	V::99.68(73184)
X	103	F	M	M::99.79(73830)
X	104	F	S	S::99.82(74043)
X	105	F	T	T::99.68(74667)
X	106	F	T	T::99.59(75145)
X	107	F	D	D::99.68(75672)
X	108	F	L	L::99.79(76110)
X	109	F	E	E::99.70(76441)
X	110	F	A	A::99.68(76902)
X	111	F	Y	Y::99.86(77445)
X	113	F	K	K::99.77(77827)
X	114	F	D	D::99.71(78273)
X	115	F	C	C::99.56(78361)
X	116	F	L	L::99.77(78903)
X	118	F	K	K::99.62(79451)
X	119	F	D	D::98.93(79539)
X	120	F	W	W::99.68(80168)
X	121	F	E	E::99.80(80541)
X	122	F	E	E::99.74(80565)
X	123	F	L	L::95.77(77307)
X	124	F	G	G::99.83(80914)
X	125	F	E	E::99.85(79041)
X	126	F	E	E::99.86(50794)
X	127	F	I	I::84.90(39147) N::7.54(3478) T::6.76(3119)
X	128	F	R	R::99.76(47304)
X	129	F	L	L::91.16(41406) S::8.75(3974)
X	130	F	M	M::99.56(41193)
X	131	F	I	I::99.73(40656)
X	133	F	V	V::99.78(40794)
X	134	F	L	L::90.87(40420) R::8.97(3991)
X	135	F	G	G::99.73(45260)
X	136	F	G	G::99.82(45591)
X	137	F	C	C::99.77(45619)
X	138	F	R	R::99.80(45975)
X	139	F	H	H::99.88(46213)
X	140	F	K	K::99.88(46057)
X	141	F	L	L::99.85(46096)
X	142	F	V	V::99.88(46068)
X	143	F	C	C::99.84(45653)
X	144	F	A	A::99.78(45714)
X	145	F	P	P::99.78(45747)
X	146	F	A	A::99.30(44209)
X	147	F	P	P::99.87(42201)
X	148	F	C	C::99.76(39527)
X	149	F	N	N::99.81(37249)
X	152	F	T	T::99.09(33984)
X	153	F	S	S::99.90(34866)
C	1	F	M	M::99.86(52755)

C	2	F	D	D::99.29(53540)
C	3	F	I	I::99.90(54489)
C	4	F	D	D::99.75(53119)
C	5	F	P	P::99.85(55562)
C	6	F	Y	Y::99.85(55826)
C	7	F	K	K::99.86(56537)
C	8	F	E	E::99.68(56947)
C	10	F	G	G::99.72(57653)
C	11	F	A	A::99.89(58413)
C	12	F	T	T::99.86(59133)
C	13	F	V	V::99.89(59713)
C	14	F	E	E::99.79(59728)
C	15	F	L	L::99.89(59858)
C	16	F	L	L::99.80(60553)
C	17	F	S	S::99.83(60281)
C	19	F	L	L::99.93(61020)
C	20	F	P	P::99.80(61977)
C	21	F	S	S::99.13(61040)
C	22	F	D	D::99.74(62257)
C	25	F	P	P::99.77(62612)
C	26	F	S	S::99.55(61456)
C	27	F	V	V::99.83(62251)
C	28	F	R	R::99.62(60027)
C	29	F	D	D::99.79(60530)
C	30	F	L	L::99.90(60280)
C	31	F	L	L::99.87(58310)
C	32	F	D	D::99.85(60259)
C	33	F	T	T::99.77(59233)
C	34	F	A	A::99.75(58718)
C	35	F	S	S::99.79(57839)
C	36	F	A	A::99.84(58664)
C	37	F	L	L::99.88(56210)
C	38	F	Y	Y::99.73(58014)
C	39	F	R	R::99.63(58065)
C	40	F	E	E::99.59(57664)
C	41	F	A	A::99.86(58064)
C	42	F	L	L::99.82(56675)
C	43	F	E	E::99.84(57405)
C	44	F	S	S::99.86(56927)
C	45	F	P	P::97.54(55905)
C	46	F	E	E::99.39(56685)
C	47	F	H	H::99.77(56461)
C	48	F	C	C::99.64(54443)
C	49	F	S	S::99.88(56101)
C	50	F	P	P::99.82(56922)
C	51	F	H	H::99.85(54181)
C	52	F	H	H::99.75(56053)
C	53	F	T	T::99.79(56693)
C	54	F	A	A::99.64(56033)
C	55	F	L	L::99.86(56223)
C	56	F	R	R::99.83(56517)

C	57	F	Q	Q::99.88(56879)
C	58	F	A	A::99.79(56938)
C	59	F	I	I::99.82(57773)
C	60	F	L	L::99.81(57312)
C	61	F	C	C::99.84(57421)
C	62	F	W	W::99.76(57265)
C	63	F	G	G::99.87(57869)
C	64	F	D	D::98.88(56954)
C	65	F	L	L::99.85(56097)
C	66	F	M	M::99.74(59824)
C	67	F	T	T::98.06(59056)
C	68	F	L	L::99.94(59433)
C	69	F	A	A::87.08(48071) G::12.75(7039)
C	70	F	T	T::99.84(55114)
C	71	F	W	W::99.81(60957)
C	72	F	V	V::99.89(62157)
C	73	F	G	G::99.89(62584)
C	74	F	G	G::99.77(60570)
C	75	F	N	N::99.92(64494)
C	76	F	L	L::99.88(64959)
C	77	F	E	E::99.69(64878)
C	78	F	D	D::99.86(65176)
C	79	F	P	P::99.86(64172)
C	80	F	I	I::88.03(51411) V::11.50(6718)
C	81	F	S	S::99.89(58318)
C	82	F	R	R::99.66(58191)
C	83	F	D	D::99.84(67573)
C	84	F	L	L::99.88(68936)
C	85	F	V	V::99.86(69763)
C	86	F	V	V::99.87(70513)
C	87	F	S	S::99.88(71103)
C	88	F	Y	Y::99.84(71257)
C	89	F	V	V::99.93(69210)
C	90	F	N	N::99.84(71389)
C	91	F	T	T::99.88(71542)
C	92	F	H	H::71.94(50531) N::27.86(19570)
C	93	F	M	M::99.70(64552)
C	94	F	G	G::99.82(64631)
C	95	F	L	L::99.88(64666)
C	96	F	K	K::99.88(72920)
C	98	F	R	R::99.74(71715)
C	99	F	Q	Q::99.85(74404)
C	100	F	L	L::99.88(74910)
C	101	F	L	L::99.87(75496)
C	102	F	W	W::99.78(75800)
C	104	F	H	H::99.85(76474)
C	105	F	I	I::99.88(76600)
C	106	F	S	S::99.91(76162)
C	107	F	C	C::99.86(75286)
C	108	F	L	L::99.87(75479)
C	109	F	T	T::99.89(75991)



C	111	F	G	G::99.75(74791)
C	112	F	R	R::98.68(74050)
C	113	F	E	E::99.78(75350)
C	114	F	T	T::99.80(75504)
C	115	F	V	V::99.87(71165)
C	116	F	I	I::99.61(73372)
C	117	F	E	E::99.86(74365)
C	118	F	Y	Y::99.89(71053)
C	119	F	L	L::99.92(73123)
C	120	F	V	V::99.86(70383)
C	121	F	S	S::99.90(72789)
C	123	F	G	G::99.89(73436)
C	124	F	V	V::99.91(73727)
C	125	F	W	W::99.79(73109)
C	126	F	I	I::99.89(73453)
C	127	F	R	R::99.61(72479)
C	128	F	T	T::99.92(73391)
C	129	F	P	P::99.91(73650)
C	130	F	P	P::99.70(70085)
C	131	F	A	A::99.77(73147)
C	132	F	Y	Y::99.87(73506)
C	133	F	R	R::99.80(73591)
C	134	F	P	P::99.85(73771)
C	135	F	P	P::99.67(74017)
C	136	F	N	N::99.93(75147)
C	137	F	A	A::99.81(74995)
C	138	F	P	P::99.86(75824)
C	139	F	I	I::99.88(75852)
C	140	F	L	L::99.84(75566)
C	141	F	S	S::99.92(76679)
C	142	F	T	T::99.87(77250)
C	143	F	L	L::99.94(77681)
C	144	F	P	P::99.84(78089)
C	145	F	E	E::99.81(78412)
C	146	F	T	T::99.85(80089)
C	147	F	T	T::99.79(80756)
C	148	F	V	V::99.80(81503)
C	149	F	V	V::99.84(82094)
C	150	F	R	R::99.83(81962)
C	151	F	R	R::98.38(81197)
C	152	F	R	R::96.16(79635)
C	153	F	C	C::86.87(70526) G::12.86(10439)
C	154	F	R	R::99.79(86112)
C	155	F	S	S::96.73(83875)
C	156	F	P	P::99.81(87952)
C	157	F	R	R::99.81(88409)
C	158	F	R	R::99.84(89491)
C	159	F	R	R::99.79(91205)
C	160	F	T	T::99.91(93345)
C	161	F	P	P::99.86(94946)
C	162	F	S	S::99.83(95012)

C	163	F	P	P::99.92(97751)
C	164	F	R	R::99.64(98844)
C	165	F	R	R::99.78(101091)
C	166	F	R	R::99.76(101859)
C	167	F	R	R::99.57(100550)
C	168	F	S	S::99.86(104651)
C	169	F	Q	Q::99.28(105950)
C	170	F	S	S::99.90(108021)
C	171	F	P	P::99.79(109969)
C	172	F	R	R::99.72(111067)
C	173	F	R	R::99.65(111196)
C	174	F	*	*::74.96(80624) R::24.89(26769) temp3:variations temp1:temp2 quality
C	175	F	R	R::99.78(117025)
C	176	F	S	S::99.86(118023)
C	177	F	Q	Q::99.55(119340)
C	178	F	S	S::99.67(119894)
C	179	F	R	R::99.79(121889)
C	180	F	E	E::99.59(123451)
C	181	F	S	S::99.63(123901)
C	182	F	Q	Q::86.94(109266) *::12.79(16080)
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P1	1	F	M	M::99.84(74899)
P1	2	F	P	P::99.84(75187)
P1	3	F	L	L::99.85(75637)
P1	4	F	S	S::99.87(75913)
P1	5	F	Y	Y::99.83(76133)
P1	6	F	Q	Q::99.78(76956)
P1	7	F	H	H::99.87(77640)
P1	9	F	R	R::99.81(78302)
P1	10	F	R	R::99.34(78460)
P1	11	F	L	L::99.91(79913)
P1	12	F	L	L::99.94(80855)
P1	13	F	L	L::99.89(81332)
P1	14	F	L	L::99.89(80931)
P1	15	F	D	D::99.66(82224)
P1	16	F	D	D::98.16(81914)
P1	17	F	D	D::83.50(67765) E::12.88(10454)
P1	18	F	A	A::99.56(84555)
P1	19	F	G	G::99.88(86557)
P1	20	F	P	P::99.84(87319)
P1	21	F	L	L::99.87(86697)
P1	22	F	E	E::99.85(88043)
P1	23	F	E	E::99.82(89461)
P1	24	F	E	E::99.78(91497)
P1	25	F	L	L::99.91(93337)
P1	26	F	P	P::99.84(95282)
P1	27	F	R	R::99.15(95744)
P1	28	F	L	L::99.91(98237)
P1	29	F	A	A::99.66(98782)
P1	30	F	D	D::99.81(101982)
P1	31	F	E	E::99.69(102802)
P1	32	F	G	G::99.27(100241)

P1	33	F	L	L::99.85(104990)
P1	34	F	N	N::99.88(107639)
P1	35	F	R	R::99.52(108788)
P1	36	F	R	R::99.80(110688)
P1	37	F	V	V::99.80(112483)
P1	38	F	A	A::99.64(107162)
P1	39	F	E	E::99.63(114836)
P1	40	F	D	D::99.79(117376)
P1	41	F	L	L::99.83(118123)
P1	42	F	N	N::99.48(120168)
P1	43	F	L	L::99.90(120639)
P1	44	F	G	G::99.82(122602)
P1	45	F	N	N::99.72(124857)
P1	46	F	L	L::99.74(123830)
P1	47	F	N	N::99.74(127303)
P1	48	F	V	V::99.65(127970)
P1	49	F	S	S::99.55(128299)
P1	50	F	I	I::99.88(129745)
P1	51	F	P	P::99.92(130688)
P1	52	F	W	W::99.75(130001)
P1	53	F	T	T::99.89(131752)
P1	54	F	H	H::99.87(132895)
P1	55	F	K	K::99.84(133666)
P1	56	F	V	V::99.92(134917)
P1	57	F	G	G::99.77(134465)
P1	58	F	N	N::99.86(135744)
P1	60	F	T	T::99.85(135176)
P1	61	F	G	G::99.90(134757)
P1	62	F	L	L::99.90(134780)
P1	63	F	Y	Y::99.88(134543)
P1	64	F	S	S::99.92(134203)
P1	65	F	S	S::99.91(133460)
P1	66	F	T	T::99.09(132766)
P1	67	F	V	V::99.84(128311)
P1	68	F	P	P::99.80(131514)
P1	69	F	V	V::99.85(132229)
P1	71	F	N	N::99.87(130839)
P1	72	F	P	P::99.49(129409)
P1	73	F	Q	Q::99.64(122628)
P1	74	F	W	W::99.80(126200)
P1	75	F	K	K::99.75(126893)
P1	76	F	T	T::99.79(126857)
P1	77	F	P	P::99.82(126323)
P1	78	F	S	S::99.73(124868)
P1	80	F	P	P::99.85(123766)
P1	81	F	N	N::99.71(117275)
P1	82	F	I	I::99.86(121549)
P1	83	F	H	H::99.89(121857)
P1	84	F	L	L::99.92(119613)
P1	85	F	H	H::99.82(118988)
P1	86	F	Q	Q::99.79(116064)

P1	87	F	D	D::99.83(116175)
P1	88	F	I	I::99.88(114136)
P1	89	F	I	I::99.74(106393)
P1	90	F	K	K::98.08(108234)
P1	91	F	K	K::99.68(110288)
P1	92	F	C	C::99.85(109758)
P1	93	F	E	E::99.80(107965)
P1	94	F	Q	Q::99.77(106764)
P1	96	F	V	V::99.86(103820)
P1	97	F	G	G::99.79(98635)
P1	98	F	P	P::99.88(101539)
P1	99	F	L	L::99.86(101361)
P1	100	F	T	T::99.83(98806)
P1	101	F	V	V::99.82(95201)
P1	102	F	N	N::99.88(98958)
P1	103	F	E	E::99.74(95966)
P1	104	F	K	K::99.87(93739)
P1	105	F	R	R::99.78(90348)
P1	106	F	R	R::99.85(94411)
P1	107	F	L	L::99.91(93945)
P1	108	F	Q	Q::99.59(93047)
P1	109	F	L	L::99.88(89021)
P1	110	F	I	I::99.70(91264)
P1	111	F	M	M::99.73(91325)
P1	112	F	P	P::99.80(91117)
P1	113	F	A	A::99.76(90721)
P1	114	F	R	R::99.88(90792)
P1	116	F	Y	Y::99.81(90050)
P1	117	F	P	P::99.84(90117)
P1	118	F	N	N::52.35(45554) K::47.38(41234)
P1	119	F	V	V::99.78(89072)
P1	120	F	T	T::99.89(89532)
P1	121	F	K	K::99.90(89174)
P1	122	F	Y	Y::99.92(88493)
P1	123	F	L	L::99.77(87042)
P1	124	F	P	P::99.80(86926)
P1	125	F	L	L::99.88(81610)
P1	126	F	D	D::99.86(83892)
P1	127	F	K	K::99.78(84562)
P1	128	F	G	G::99.88(84137)
P1	129	F	I	I::99.92(83787)
P1	130	F	K	K::99.87(82803)
P1	131	F	P	P::99.86(82306)
P1	132	F	Y	Y::99.91(80813)
P1	133	F	Y	Y::99.94(80576)
P1	134	F	P	P::99.87(79901)
P1	135	F	E	E::99.68(79577)
P1	136	F	H	H::99.78(79358)
P1	137	F	L	L::98.83(77088)
P1	138	F	V	V::99.86(78205)
P1	139	F	N	N::98.41(76558)

P1	140	F	H	H::99.83(76670)
P1	141	F	Y	Y::99.92(75472)
P1	143	F	Q	Q::99.71(73920)
P1	144	F	T	T::99.91(73485)
P1	145	F	R	R::99.79(72815)
P1	146	F	H	H::99.87(72600)
P1	147	F	Y	Y::99.89(71915)
P1	148	F	L	L::99.86(70889)
P1	149	F	H	H::99.78(70648)
P1	150	F	T	T::99.88(69963)
P1	151	F	L	L::99.89(68683)
P1	152	F	W	W::99.71(67944)
P1	153	F	K	K::99.86(67589)
P1	154	F	A	A::99.75(66372)
P1	155	F	G	G::99.74(65928)
P1	156	F	I	I::99.50(65212)
P1	157	F	L	L::99.91(64558)
P1	158	F	Y	Y::99.90(63859)
P1	159	F	K	K::99.86(62988)
P1	160	F	R	R::99.79(61973)
P1	161	F	E	E::99.76(61714)
P1	162	F	T	T::99.87(61086)
P1	163	F	T	T::99.92(60542)
P1	164	F	R	R::99.76(55003)
P1	165	F	S	S::99.82(55041)
P1	166	F	A	A::99.85(57735)
P1	167	F	S	S::99.86(57156)
P1	169	F	C	C::99.02(55280)
P1	170	F	G	G::99.77(55115)
P1	171	F	S	S::99.84(54266)
P1	172	F	Q	Q::97.14(50469)
P1	173	F	Y	Y::99.93(53699)
P1	174	F	S	S::99.91(52832)
P1	175	F	W	W::99.71(51510)
P1	176	F	E	E::99.79(51310)
P1	177	F	Q	Q::99.89(50211)
P1	178	F	E	E::99.81(49934)
P1	179	F	L	L::99.81(49103)
P1	180	F	Q	Q::99.46(48216)
P1	181	F	H	H::99.61(47965)
P1	182	F	G	G::99.47(46975)
P1	183	F	A	A::99.77(45376)
P1	184	F	E	E::99.79(45303)
P1	185	F	S	S::99.78(44649)
P1	187	F	H	H::97.75(42235)
P1	188	F	Q	Q::99.58(42739)
P1	189	F	Q	Q::99.24(42137)
P1	190	F	S	S::99.81(42018)
P1	191	F	S	S::99.76(41450)
P1	192	F	G	G::99.80(41165)
P1	193	F	I	I::99.91(40818)

P1	194	F	L	L::99.54(39785)
P1	195	F	S	S::99.74(39411)
P1	196	F	R	R::99.68(39165)
P1	197	F	P	P::99.68(39196)
P1	198	F	P	P::99.38(39002)
P1	199	F	V	V::99.72(39181)
P1	200	F	G	G::99.66(38731)
P1	201	F	S	S::99.53(38367)
P1	202	F	S	S::99.61(37388)
P1	203	F	L	L::99.72(36523)
P1	204	F	Q	Q::99.66(35264)
P1	205	F	S	S::99.51(34638)
P1	206	F	K	K::99.74(33836)
P1	207	F	H	H::99.45(33006)
P1	208	F	R	R::98.67(31871)
P1	209	F	K	K::99.60(31248)
P1	210	F	S	S::99.56(30482)
P1	211	F	R	R::99.25(29340)
P1	212	F	L	L::99.05(28554)
P1	213	F	G	G::99.55(27690)
P1	214	F	L	L::99.67(27029)
P1	215	F	Q	Q::99.28(25923)
P1	216	F	S	S::99.72(25393)
P1	217	F	Q	Q::99.46(24445)
P1	218	F	Q	Q::99.49(23386)
P1	219	F	E	E::66.07(14962) G::33.49(7584)
P1	220	F	H	H::99.29(22328)
P1	221	F	L	L::99.67(21719)
P1	222	F	A	A::99.09(20779)
P1	223	F	R	R::99.08(19867)
P1	224	F	R	R::98.90(19343)
P1	225	F	Q	Q::99.75(18872)
P1	226	F	Q	Q::99.78(18031)
P1	227	F	G	G::99.91(3324)
P1	228	F	R	R::99.69(3192)
P1	229	F	S	S::99.24(3136)
P1	230	F	W	W::99.55(3132)
P1	231	F	S	S::99.84(3142)
P1	232	F	I	I::99.90(3151)
P1	233	F	R	R::99.64(3082)
P1	234	F	A	A::97.96(2882)
P1	235	F	G	G::99.64(3011)
P1	236	F	I	I::93.83(2846) T::5.90(179)
P1	237	F	H	H::99.87(2997)
P1	238	F	P	P::99.87(3008)
P1	239	F	T	T::99.63(2980)
P1	240	F	A	A::99.48(2847)
P1	241	F	R	R::99.37(2979)
P1	242	F	R	R::99.87(2999)
P1	243	F	P	P::99.80(2996)
P1	245	F	G	G::99.77(3006)

P1	246	F	V	V::99.83(2998)
P1	247	F	E	E::99.83(2997)
P1	248	F	P	P::99.64(3023)
P1	249	F	S	S::99.47(3018)
P1	250	F	G	G::99.38(3057)
P1	251	F	S	S::99.81(3092)
P1	252	F	G	G::99.43(3149)
P1	253	F	H	H::99.71(3110)
P1	254	F	T	T::97.10(2844)
P1	255	F	T	T::99.32(2909)
P1	256	F	N	N::99.72(3244)
P1	257	F	L	L::99.51(3259)
P1	258	F	A	A::99.48(3272)
P1	259	F	S	S::99.64(3286)
P1	260	F	K	K::99.88(3328)
P1	261	F	S	S::99.73(3311)
P1	262	F	A	A::99.67(3335)
P1	263	F	S	S::99.94(3376)
P1	264	F	C	C::99.64(3362)
P1	265	F	L	L::99.53(3160)
P1	266	F	Y	Y::99.24(3151)
P1	267	F	Q	Q::99.91(3172)
P1	268	F	S	S::99.90(3117)
P1	269	F	P	P::99.64(3039)
P1	270	F	V	V::99.90(2983)
P1	271	F	R	R::99.70(2977)
P1	272	F	K	K::99.25(2893)
P1	273	F	A	A::99.33(2806)
P1	274	F	A	A::99.85(2750)
P1	275	F	Y	Y::92.00(2450) H::6.76(180)
P1	276	F	P	P::99.28(2604)
P1	277	F	S	S::99.84(2544)
P1	278	F	V	V::98.11(2491)
P1	279	F	S	S::99.84(2491)
P1	280	F	T	T::99.33(2390)
P1	282	F	E	E::98.98(2239)
P1	283	F	R	R::94.47(2069) K::5.21(114)
P1	284	F	H	H::93.92(2056) Y::6.03(132)
P1	285	F	S	S::82.74(1764) P::8.96(191) A::8.07(172)
P1	286	F	S	S::99.95(2103)
P1	287	F	S	S::99.85(2009)
P1	288	F	G	G::99.85(1974)
P1	289	F	H	H::98.05(1860)
P1	290	F	A	A::99.01(1799)
P1	291	F	V	V::99.83(1744)
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S1	1	F	M	M::99.31(47586)
S1	2	F	G	G::99.81(46727)
S1	3	F	Q	Q::99.85(45343)
S1	4	F	N	N::99.83(45355)
S1	5	F	L	L::99.73(44256)
S1	6	F	S	S::97.21(42476)

S1	7	F	T	T::84.33(36288) I::13.56(5835)
S1	8	F	S	S::99.51(42608)
S1	9	F	N	N::99.30(42205)
S1	10	F	P	P::99.71(41912)
S1	11	F	L	L::99.62(41193)
S1	12	F	G	G::99.81(40953)
S1	15	F	P	P::99.65(39480)
S1	16	F	D	D::99.57(39336)
S1	17	F	H	H::99.61(39257)
S1	18	F	Q	Q::99.60(39107)
S1	19	F	L	L::99.76(38967)
S1	20	F	D	D::99.53(38815)
S1	21	F	P	P::99.67(37873)
S1	22	F	A	A::99.41(37013)
S1	24	F	R	R::99.59(35054)
S1	25	F	A	A::99.36(34088)
S1	26	F	N	N::99.72(33693)
S1	27	F	T	T::99.36(32738)
S1	28	F	A	A::98.98(31533)
S1	29	F	N	N::99.59(31103)
S1	30	F	P	P::99.28(29694)
S1	31	F	D	D::99.07(29109)
S1	32	F	W	W::98.96(28138)
S1	33	F	D	D::99.56(27518)
S1	35	F	N	N::99.25(25771)
S1	36	F	P	P::99.74(25146)
S1	37	F	N	N::99.45(24261)
S1	38	F	K	K::99.43(23295)
S1	39	F	N	N::66.23(14994) D::33.45(7574)
S1	40	F	T	T::99.30(22196)
S1	41	F	W	W::99.14(21191)
S1	42	F	P	P::99.36(20213)
S1	43	F	D	D::98.97(19766)
S1	44	F	A	A::99.27(19272)
S1	45	F	N	N::99.57(18737)
S1	46	F	K	K::99.93(17916)
S1	47	F	V	V::100.00(3226)
S1	48	F	G	G::99.65(3169)
S1	49	F	A	A::99.40(3137)
S1	50	F	G	G::99.71(3129)
S1	51	F	A	A::99.81(3133)
S1	53	F	G	G::99.77(3096)
S1	54	F	L	L::94.43(2778) P::5.47(161)
S1	55	F	G	G::99.77(3038)
S1	56	F	F	F::93.91(2837) L::5.96(180)
S1	57	F	T	T::99.87(2998)
S1	58	F	P	P::99.87(2996)
S1	59	F	P	P::99.72(2854)
S1	60	F	H	H::99.73(2974)
S1	61	F	G	G::99.50(2969)
S1	62	F	G	G::99.90(3021)



S1	63	F	L	L::99.26(2962)
S1	64	F	L	L::99.97(2997)
S1	65	F	G	G::99.73(2995)
S1	66	F	W	W::99.80(2987)
S1	67	F	S	S::99.83(3004)
S1	68	F	P	P::99.57(3043)
S1	69	F	Q	Q::99.71(3051)
S1	70	F	A	A::99.84(3083)
S1	71	F	Q	Q::99.75(3157)
S1	72	F	G	G::99.46(3145)
S1	73	F	I	I::96.88(2984)
S1	74	F	L	L::99.93(2927)
S1	75	F	Q	Q::99.84(3175)
S1	76	F	T	T::99.72(3261)
S1	77	F	L	L::99.48(3239)
S1	78	F	P	P::99.73(3290)
S1	79	F	A	A::99.63(3270)
S1	80	F	N	N::99.67(3325)
S1	81	F	P	P::99.94(3323)
S1	82	F	P	P::99.88(3366)
S1	83	F	P	P::99.91(3413)
S1	84	F	A	A::99.56(3161)
S1	85	F	S	S::99.72(3166)
S1	86	F	T	T::99.91(3172)
S1	87	F	N	N::99.94(3170)
S1	88	F	R	R::99.87(3096)
S1	89	F	Q	Q::99.11(3018)
S1	90	F	S	S::99.93(2984)
S1	91	F	G	G::99.90(2932)
S1	92	F	R	R::99.69(2890)
S1	93	F	Q	Q::99.71(2794)
S1	94	F	P	P::99.85(2691)
S1	95	F	T	T::99.74(2645)
S1	96	F	P	P::99.53(2536)
S1	97	F	L	L::99.88(2545)
S1	98	F	S	S::99.92(2519)
S1	99	F	P	P::99.79(2432)
S1	100	F	P	P::99.96(2387)
S1	101	F	L	L::100.00(2336)
S1	102	F	R	R::99.91(2250)
S1	103	F	D	D::94.75(2074) N::5.16(113)
S1	104	F	T	T::99.86(2159)
S1	105	F	H	H::99.95(2122)
S1	106	F	P	P::100.00(2085)
S1	107	F	Q	Q::99.70(1999)
S1	108	F	A	A::99.90(1956)
S1	109	F	M	M::95.84(1798)
S1	110	F	Q	Q::99.50(1783)

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Meta data	
Assembly file:	HBV-RYD-2.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-2
Date/Time	Fri 22 Mar 10:29:38 GMT 2019