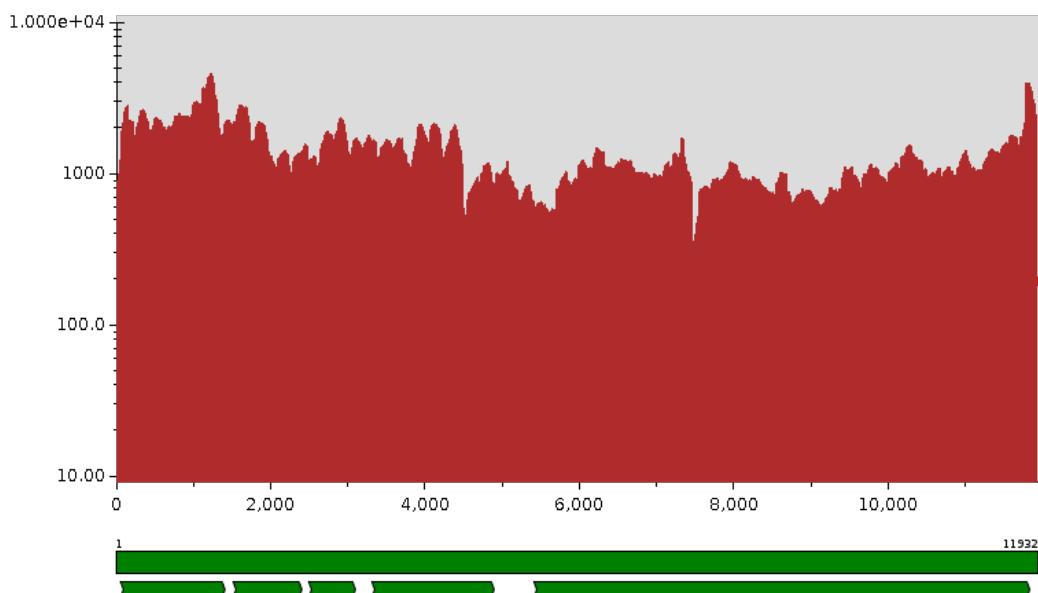


NGS Details (MG-11-RNASeq021-ZymoSeq): Lyssavirus rabies

Assembly

Coverage Length	11932 (1 contig(s))
Depth Of Coverage	1316.2
Number Of Reads	124074
Reads Per Million	1154.20 rpm (after QC)
Ambiguities	0
Assembly Method	de novo + reference guided assembly
Consensus Caller	Bcf Tools

Coverage Map



Assignment

Type	Lyssavirus rabies (Taxonomy ID: 11292)
Reference Genome	NC_001542.1
NT Identity (%)	80.6238
AA Identity (%)	90.884
Number Of Stop Codons	6
Number Of CDS	5

Alignment

Alignment Score	14569.0 (NT) + 23157.0 (AA) = 37726.0
Concordance (%)	76.8601

Alignment Method

Local, heuristic, nucleotide (BLASTN)

Genome Region

Sequence starts at position 1 and ends at position 11932 relative to NC_001542.1 reference sequence.

Alignment Detailed Statistics

	Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10	



Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10
13C>A, 15G>A, 20A>G, 25A>G, 28A>G, 29C>T, 36C>T, 40A>G, 41A>T, 42T>C, 43G>T, 44G>A, 47G>A, 51A>C, 65T>C, 109G>A, 115C>T, 119T>C, 130G>A, 136C>T, 139G>A, 142T>C, 163T>A, 166C>T, 175T>C, 181A>G, 188T>A, 195C>T, 196T>C, 197C>T, 211C>G, 214T>C, 217A>G, 220T>C, 226A>T, 232G>A, 236G>A, 244A>C, 245T>G, 247C>A, 252G>A, 253C>T, 256C>A, 262A>G, 268T>C, 283T>C, 286C>T, 290T>C, 292G>A, 295G>C, 310T<G, 319G>A, 320A>G, 321C>T, 325T>C, 328G>C, 331A>G, 335G>T, 358T>A, 366G>A, 367G>A, 376G>A, 382C>A, 394G>T, 400G>C, 405A>T, 409T>A, 413G>A, 415T>C, 418A>G, 421A>G, 436G>A, 442A>G, 445C>T, 451A>G, 452C>T, 457A>G, 457T>C, 475G>T, 478G>A, 484G>A, 487C>T, 490A>G, 493C>T, 532C>T, 535G>A, 538A>G, 540G>A, 544T>C, 547T>C, 550C>T, 553C>T, 565G>A, 568A>G, 571C>T, 574G>A, 589T>C, 601T>C, 607T>A, 607T>G, 610A>G, 614G>A, 616G>A, 622C>T, 628T>C, 629C>T, 631A>G, 640T>C, 652C>T, 655C>T, 658T>C, 667T>C, 685T>C, 688G>A, 691C>A, 694A>G, 700T>C, 716C>A, 718A>G, 730A>G, 739A>G, 742C>T, 748G>A, 784A>G, 785C>T, 793A>G, 799T>A, 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CDS

RABVgp1	1	451	100%	2965	95.4%	451 (100%)	429 (95.1%)	0/0/0/0	1
Protein mutations:									
C40S (188T>A), T42I (195C>T 196T>C), V56I (236G>A), C59G (245T>G 247C>A), S61N (252G>A 253C>T), T84V (320A>C 321C>T), E87D (331A>T), V95L (353G>A), K99R (366A>G, 367A>G), E110D (400G>C), K112I (405A>T), D115N (413G>A 415T>C), P135S (473C>T 475T>G), S157N (540G>A), V182L (614G>A), I257L (639A>G), Q367K (726A>G), D376V (736A>G), G377A (746A>G), R378V (756A>G), A379W (766A>G), S380P (776A>G), T381W (786A>G), A382W (796A>G), C383W (806A>G), T384W (816A>G), A385W (826A>G), C386W (836A>G), T387W (846A>G), A388W (856A>G), T389W (866A>G), G390W (876A>G), G391W (886A>G), T392W (896A>G), A393W (906A>G), G394W (916A>G), T395W (926A>G), A396W (936A>G), G397W (946A>G), T398W (956A>G), A399W (966A>G), G400W (976A>G), T401W (986A>G), A402W (996A>G), G403W (1006A>G), T404W (1016A>G), G405W (1026A>G), A407W (1036A>G), G408W (1046A>G), T410W (1066A>G), G411W (1086A>G), G412W (1106A>G), G413W (1126A>G), G414W (1146A>G), G415W (1166A>G), G416W (1186A>G), G417W (1206A>G), G418W (1226A>G), G419W (1246A>G), G420W (1266A>G), G421W (1286A>G), G422W (1306A>G), G423W (1326A>G), G424W (1346A>G), G425W (1366A>G), G426W (1386A>G), G427W (1406A>G), G428W (1426A>G), G429W (1446A>G), G430W (1466A>G), G431W (1486A>G), G432W (1506A>G), G433W (1526A>G), G434W (1546A>G), G435W (1566A>G), G436W (1586A>G), G437W (1606A>G), G438W (1626A>G), G439W (1646A>G), G440W (1666A>G), G441W (1686A>G), G442W (1706A>G), G443W (1726A>G), G444W (1746A>G), G445W (1766A>G), G446W (1786A>G), G447W (1806A>G), G448W (1826A>G), G449W (1846A>G), G450W (1866A>G), G451W (1886A>G), G452W (1906A>G), G453W (1926A>G), G454W (1946A>G), G455W (1966A>G), G456W (1986A>G), G457W (2006A>G), G458W (2026A>G), G459W (2046A>G), G460W (2066A>G), G461W (2086A>G), G462W (2106A>G), G463W (2126A>G), G464W (2146A>G), G465W (2166A>G), G466W (2186A>G), G467W (2206A>G), G468W (2226A>G), G469W (2246A>G), G470W (2266A>G), G471W (2286A>G), G472W (2306A>G), G473W (2326A>G), G474W (2346A>G), G475W (2366A>G), G476W (2386A>G), G477W (2406A>G), G478W (2426A>G), G479W (2446A>G), G480W (2466A>G), G481W (2486A>G), G482W (2506A>G), G483W (2526A>G), G484W (2546A>G), G485W (2566A>G), G486W (2586A>G), G487W (2606A>G), G488W (2626A>G), G489W (2646A>G), G490W (2666A>G), G491W (2686A>G), G492W (2706A>G), G493W (2726A>G), G494W (2746A>G), G495W (2766A>G), G496W (2786A>G), G497W (2806A>G), G498W (2826A>G), G499W (2846A>G), G500W (2866A>G), G501W (2886A>G), G502W (2906A>G), G503W (2926A>G), G504W (2946A>G), G505W (2966A>G), G506W (2986A>G), G507W (3006A>G), G508W (3026A>G), G509W (3046A>G), G510W (3066A>G), G511W (3086A>G), G512W (3106A>									

	Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10	
Codon mutations:									
	CGT5CGC (2510T>C), GTG8GTA (2519G>A), AAA9AAG (2522A>G), AAT10AAC (2525T>C), TGC11TGT (2528C>T), AGG12AGA (2531G>A), GAC13GAT (2534C>T), GAG14GAA (2537G>A), AAA18AAG (2549A>G), TCT20TC (2555T>C), CCC21TT (2556C>T), TCA23TC (2564A>G), GCC24GCT (2567C>T), CTG26CCA (2572T>C), CTC27GAA (2573G>A), GAC28GAT (2579C>T), CTT33TTA (2592C>T, 2594T>A), CCA34CCC (2597A>C), CCC35CCCT (2600C>T), CCT36CCA (2603T>A), TAC38TAT (2609C>T), GTC39GTT (2612C>T), AAA42AAG (2621A>G), GAA43GAG (2624A>G), CTT44CTC (2627T>C), AA4G8AAA (2639G>A), AGG50ATG (2644G>T), AGG51AGA (2648G>A), TGT54TGC (2657T>C), ATC55GTC (2658A>G), AAC56AAT (2663C>T), GGG58GAA (2668G>A), AAA60AAG (2675A>G), TGT62TC (2681T>C), AGC63AGT (2684C>T), CCG64CCA (2687G>A), AAT65AAC (2690T>C), GGT66GGC (2693T>C), TAC67TAT (2696C>T), TCG68TCA (2699G>A), TCT69TT (2702C>T), CGC70AGG (2703C>T), CTG76TTG (2721C>T), AGA77AAG (2725G>A), GAC80GAT (2738C>T), ATA82ATC (2741A>C), GGG85GGA (2750G>A), CAT87CAA (2756T>A), AGG88AGA (2759G>A), GTC90ATT (2763G>A, 2765C>T), GG919GGA (2768G>A), GCT104GCC (2807T>C), CCT107CCA (2816T>A), AAC111AAT (2828C>T), TCC122TT (2861C>T), TCC127TCT (2876C>T), CTT131CTA (2888T>A), CAG140CAA (2915G>A), GAG141GAA (2918G>A), ATC142ATT (2921C>T), ATC143ACC (2924T>C), AAC147GAC (2934A>G, 2936T>A), CAA148ACA (2937A>G), ACT148AAT (2941A>G), GAG149GAA (2942G>A), ATC150TTT (2945C>T), GTC151ATC (2946G>A), CAA154GAA (2955C>G), AGA156CGA (2961A>C), AAA160AG (2974A>G), CAG161CAA (2978G>A), TGT162TGC (2981T>C), ATC164ATT (2987C>T), CGG165GAG (2989G>A), AGA167AGG (2996A>G), ATC168ATT (2999C>T), ATC171AT (3008C>T), AAC174AAT (3017C>T), TCG175TCT (3020G>T), AGA176CGG (3021A>C, 3023A>G), GCA177GGC (3026A>G), GGT178TGT (3027G>T), CTA180TTG (3033C>T, 3035A>G), TCT185TCC (3050T>C), CTT186CTC (3053T>C), CAG187AAG (3054C>A, 3056G>A), TCC191TCT (3068C>T), GAA192GAG (3071A>G), GAC194GAT (3077C>T), GAT196GAC (3083T>C), TCC197TCT (3086C>T), TCC198TCA (3089T>A), CTG199GTA (3090C>G, 3092G>A), CTT200CTC (3095T>C), CTA201CTT (3098A>T), TAA203TAG (3104A>G)								
RABVgp4	1	525	100%	3315	87.2%	525 (100%)	452 (86.1%)	0/0/0	1
Protein mutations:									
	V21 (3321G>A, 3323T>C), F8L (3339T>C, 3341T>G), L12V (3351C>G), V13I (3354G>A, 3356T>C), F14S (3385T>C, 3389T>C), P15S (3360C>T), F18L (3369T>C, 3371T>C), N56S (3484A>C, 3485C>T), M75V (3540A>G), T109M (3643C>T, 3644A>G), P110S (3645C>T), M121V (3678A>G), H150I (3713G>A), L161M (3798T>A), R166K (3814G>A), H169R (3823A>G, 3824C>G), V172I (3831G>A, 3833C>T), N177I (3848T>G), S179L (3853C>T, 3854A>G), V181I (3858G>A), N201E (3918A>G, 3920T>A), P202A (3921C>G, 3923G>A), G205E (3931G>A), M206T (3934T>C, 3935G>A), R215F (3936G>A), S223D (3940C>T), E224F (3948K>G), T225I (3991C>T), K243R (4045A>G, 4046A>G), V249I (4062G>A), L250S (4065C>T, 4066T>A), M262I (4103G>T), N266E (4113A>G, 4115T>G), P273S (4134C>T, 4136C>G), G274D (4138G>A), H280R (4156A>G), R283H (4165G>A), R365K (4416G>A), N375D (4420A>G), V408E (4540T>A, 4541A>G), N427E (4586A>G, 4589B>G), D429N (4602G>A, 4604C>T), D433N (4614G>A, 4616T>C), V442I (4641G>A, 4643T>C), E444K (4647G>A), R445Q (4651G>A), I446V (4653A>G), V449I (4662G>A), W460F (4695G>A, 4697A>T), L462M (4701C>A), T468A (4719A>G, 4721T>A), M471I (4730G>A), I473T (4735T>C), M477I (4748G>T), W480C (4757G>C), S486T (4773T>A), P488S (4779C>T, 4781T>A), T489I (4783C>T), Q490K (4785C>A, 4787A>G), H491Q (4790C>A), N492G (4791A>G, 4792A>G), L493P (4795T>C, 4796G>C), R494A (4797A>G, 4798G>A), G495T (4801G>A), T496S (4803A>I), G497R (4806G>A, 4808G>A), E499K (4812G>A, 4814G>A), S506N (4834G>A), I509V (4842A>G), S515L (4860T>A, 4861C>T, 4862A>G), S518N (4870G>A, 4871C>T), G523K (4884G>A, 4885G>A, 4886A>G)								
	GTT2ATC (3321G>A, 3323T>C), CTC6CCT (3335C>T), CTG7CTA (3338G>A), TTT8CTG (3339T>C, 3341T>G), GTA9GTC (3344A>G), CCC10CCT (3347C>T), CTT11CTC (3350T>C), CTG12GTC (3351C>G), GTT13ATC (3356G>A, 3357T>C), TTT14CTC (3358T>C, 3359T>C), CCT122CCC (3383T>C), ATT23ATC (3386T>C), CTT300TC (3407T>C), GGT31GGC (3410T>C), C33C2CTC (3413C>T), AGC34AGT (3419C>T), CGG35CCC (3422G>C), ATT36ATC (3425T>C), GAC37GAT (3428C>T), CAC40CAT (3437C>T), TGC437GT (3446C>T), CAA44CTC (3449A>T), GTA48GTT (3461A>T), GAA52GAG (3473A>G), GG53GGG (3476A>G), ACC55ACT (3482C>T), AG384A>G, 3485C>T), TTC60TTT (3497C>T), CTC61TCT (3500C>T), CTT65CTC (3512T>G), AAA66AAG (3515A>G), GTT76GTA (3518T>A), TCA71TCT (3530A>T), AAA74AAG (3539A>G), ATG75GTC (3540A>G), TGC80TGT (3557C>T), ACA81ACC (3560A>C), GGC82GGT (3563C>T), AGC85ACA (3572G>A), GAG86GAA (3575G>A), TAC90TAT (3587C>T), ACT191ACC (3590T>C), TTC191TCT (3596C>T), ACA89AGC (3611A>G), AGC100ACA (3617G>A), AAA102AAG (3623A>G), AAC104AAA (3629G>A), CAT105CAC (3632T>C), 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Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10
CTC2ATC (5421C>A), CCT4CCA (5429T>A), GAG6GAT (5435G>T), GTC7GTT (5438C>T), CCT11CCC (5450T>C), GAC13GAT (5456C>T), CCA14CCT (5459A>T), ATC15ATT (5462C>T), TTA17TCA (5467T>C), GCT19ACT (5472G>A), GAA20GAG (5477A>G), CCC21ACG (5478C>A), GGA23GGG (5486A>G), ACC24AAC (5488C>A), CCC25CCT (5492C>T), ACT26AAC (5495T>C), GTC27ATT (5496G>A, 5498C>T), TTG31TAA (5510G>A), AGG32AGA (5513G>A), TCT40TCC (5537T>C), TTG42TTA (5543G>A), GAA44GAG (5549A>G), CCT46TCA (5553C>T, 5555T>A), AGA48AAA (5560G>A), TTA51TTG (5570A>G), TTA54CTG (5577T>C, 5579A>G), GGG57GGA (5588G>A), AGA59AGG (5594A>G), TAT61CCC (5598T>C, 5599A>G, 5600T>C), CGG62CGT (5603G>T), CTAG65CTG (5612A>G), TCC70TCT (5627T>C), TCT72TCC (5633T>C), TTC73TAT (5635T>A, 5636C>T), AGA74AAA (5638G>A), CTT75GTC (5642T>C), TAT79TCG (5653A>C, 5654T>C), AGA82AA (5656G>A), TTA85CTG (5670T>C, 5672G>T), GTG86GGA (5675T>A), TCC87TCT (5678T>C), GGA92GGG (5693A>G), ATG93GCT (5694A>G, 5695T>C, 5696G>T), GCT94GCA (5699T>A), Gac96CAA (5705G>A), TCA97TCT (5708A>T), TCT100TCC (5717T>C), CTC101CTT (5720C>T), TTAA103ATA (5724T>A), TAT104TAC (5729T>C), CCTC110TCG (5747C>A), GAA115AA (5761G>A, 5762A>G), TCA117ATG (5768A>G), ACA118ATC (5770C>T, 5771A>C), GAC119GAT (5774C>T), GGC121GCT (5780C>T), CAT122CAC (5783T>C), TCG127TCT (5798G>T), CCC129CC (5804C>T), GAG131GAA (5810G>A), AAC132AAA (5813G>A), TTA134TTG (5819A>G), AAT135AAC (5822T>C), CTC136TGC (5823C>T, 5824T>C), AGC137ACA (5828G>A), CTAC138CTC (5831A>C), GGA139GGG (5834A>G), CTC143CTT (5846G>T), GAG148AAT (5859G>A, 5861G>T), GGA149GGG (5864A>G), GTG150GTC (5867G>C), TTA151CTA (5868T>C), AGT152AAT (5872G>A), TGC153TGT (5876C>T), GAG155GAA (5882G>A), TAT159TAC (5894T>C), ATT161GGG (5898A>G, 5900T>C), GGA164GGG (5909A>G), AGC165GCA (5910A>C, 5912G>A), CTT167GTC (5918T>G), GCC168GCT (5921C>T), AGC170ATA (5926C>T, 5927G>A), TAT171TAC (5930T>C), TAC174TAT (5939C>T), TTG175CTG (5940T>C), TTC177TTT (5948C>T), GTC179GTC (5954A>G), TTA182CTC (5961T>C, 5963A>C), TAC183TAT (5966C>T), CTAC187TTG (5976C>T), GAC188GAT (5981C>T), GAA191GAG (5990A>G), GAA192GAG (5993A>G), AAG193AGG (5995A>G), ATC195ATT (6009T>C), AAA200AGG (6016A>G, 6017A>G), GTG205ACA (6030G>C, 6031T>C, 6032G>A), ATC207GTT (6036A>G, 6038C>T), GTA219GTC (6053A>C), TTC214TTT (6059C>T), GAC216GAT (6065C>T), CTG221TGG (6078C>T, 6079T>C), TTG222ATG (6081C>A), ATC223ATT (6086C>T), ACA225ACC (6092A>C), GAC227GAT (6098C>T), TTG229GAT (6104T>A), AGT233GTC (6114A>C), TCC234TCT (6119C>T), AAT235GCG (6120A>G, 6121A>G, 6122T>C), CTC237CTC (6128T>C), GAC239GAT (6134C>T), AAC241AAAT (6140C>T), TAC242AT (6143C>T), CCT244CTC (6149T>C), AAA247AAG (6158A>G), CTT249CTC (6164T>C), CGC253CGG (6176C>G), TTC254TTT (6179C>T), TCC256TCT (6185C>T), TTA257CTA (6186T>C), GTC259TT (6192G>A, 6194C>T), TTA260CTT (6195T>C, 6197A>T), CCC263CCT (6206C>T), GAG265GAA (6212G>A), CGA267AGC (6216C>T, 6218A>G), TAC268AT (6221C>T, 6222A>G), TCA276CTG (6245A>G), TAC280TAT (6257C>T), ATT281ATC (6260T>C), GTC282CGG (6263T>G), GGG283GGC (6266G>C), AAC285CAT 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AGT1905AGC (11132T>C), GCT1910GCC (11147T>C), CGT1911CGC (11150T>C), TTG1913TTA (11156G>A), AAC1914AAT (11159C>T), TAT1915TAC (11162T>C), CAG1916CAA (11165G>A), GAT1917GAC (11168T>C), CTT1918CTC (11171T>C), GTG1919GTA (11174G>A), AGA1920AGG (11177A>G), CCT1923CCA (11186T>A), GAA1924GAT (11189A>G), GAA1925GAC (11192A>G), TCA1928TCT (11201A>T), ATT1932AAC (11213T>C), GAG1933GAA (11216G>A), ACT1937ACC (11228T>C), CTG1938TTG (11229C>T), GAA1944GAG (11249A>G), TCT1945TCC (11255T>C), TCT1946TTT (11255T>C), CTC1947CTC (11258T>C), GTC1948GTC (11261C>G), AAG1950AAC (11267G>A), GTG1952GTC (11273G>A), CTT1955CTA (11282T>C), TTA1957CTG (11286T>C 11288A>G), AGG1959CGA (11292A>C 11294G>A), ACT1961ACC (11300T>C), CTG1962TTG (11301C>T), GTG1965GTT (11312G>T), GCT1966TCT (11313G>T), GTT1974GTC (11339T>C), GTC1979GTA (11354C>A), TTC1980TTT (11357C>T), AAC1981AT (11360C>T), GTT1982GTC (11363T>C), TCC1983TCC (11366C>G), CCC1985CCG (11372C>G), CTG1986TTC (11373C>T 11375A>G), ACT1987ATT (11377C>T), CCC1989CCT (11384C>T), TTG1990TTA (11387G>A), TTC1991TTT (11390C>T), CCA1993CCG (11396A>G), CCG1994CC (11399G>T), CTG2000TTG (11415C>T), AGG2001AGA (11420G>A), TTC2003TTT (11426C>T), AAC2004ATT (11429C>T), GTG2006TGC (11435T>C), TGC2007TGT (11438C>T), AGT2008AGC (11441T>C), ACT2009AAC (11444T>C), TAT2012TAC (11453T>C), CTA2013TA (11454C>T), TCT2014TCC (11459T>C), GCT2016GCA (11465T>A), GG2019GTA (11471T>C), GTC2020GTC (11477C>G), CCT2021TCC (11478C>T 11480T>C), TTC2023TTT (11486C>T), GCA2024GCG (11489A>G), CAC2027CAT (11498C>T), CCT2033CCC (11516T>C), TAC2037TAT (11528C>T), AGA2039AGG (11534A>G), AAC2040AAA (11537G>A), CAA2041CAG (11540A>G), GTC2042ATC (11541G>A), CTG2044CAG (11548T>A), AAC1549A>G), AAC2046AGT (11554A>G 11555C>T), TGT2047GTC (1158T>C), TCT2050TCC (11567T>C), AAC2055GAT (11580A>G 11582C>T), TTG2060TTT (11597C>T), AAC2061AAC (11600A>G), GCC2064GTC (11609C>T), TTG2065TGC (11612T>C), AAT2066AAC (11615T>C), CTG2071CTC (11630G>C), TTG2078CTA (11649T>C), GTC2083GTA (11665G>A), ACT2085ACC (11672T>C), CTC2088CTT (11681C>T), GTT2089GTC (11684T>C), GCG2090GGA (11687C>A), AGC2091AAC (11689G>A), ACT2092AAC (11693A>C), AAG2093GAA (11694A>G 11696G>A), CTA2095CTG (11702A>G), CTC2096CTG (11703T>C), GCA2097AGG (11706G>A 11708A>G), GAA2098GAG (11711A>G), GTC2099GTA (11714A>G), AAC2100GAA (11716A>G), GAA2100GAA (11717A>G), GAA2105GAT (11718A>G), AGA2101AAC (11720A>G), CAT2104GCA (11728A>G 11729T>A), AGG2105GGA (11730A>G), AGG2108GAA (11741G>A), CTG2112CTC (11753A>C), GAG2113GAT (11756G>T), ATT2114GAC (11757A>G 11759T>C), ATC2115ATT (11762C>T), TCT2117TCC (11768T>C), TCC2120TCT (11777C>T), ACT2121CTT (11780A>T), CTG2122TTC (11789C>T), AGT2125AGC (11792T>C), CTG2127TTC (11796C>T 11798G>A), TGC2128TAA (11800G>A 11810C>A), ATC2129ACT (11803T>C 11804C>T), GGA2130GAG (11806G>A 11807A>G), TAC2131CAC (11808T>C), TCC2132TCT (11813C>T), TGG2133CGA (11814T>C 11816G>A), AAC2134AGG (11818A>G), CCT2135AAT (11820C>A 11821C>A), GCC2136GTT (11824C>T 11825C>G), CAT2137AAG (11826C>A 11828T>G), GCT2138ACT (11829G>A), CTT2141CTC (11840T>C), GTG2142TGA (11841G>T 11842T>C 11843G>A), TGA2143CGA (11844T>C)

Proteins

nucleoprotein N (NP_056793.1)	1	451	100%	2965	95.4%	451 (100%)	429 (95.1%)	0/0/0/0	1
Protein mutations:									
C40S (188T>A), T42I (195C>T 196T>C), V56I (236G>A), C59G (245T>G 247C>A), S61N (252G>A 253C>T), T84V (320A>G 321C>T), E87D (331A>T), V95L (353G>T), K99R (366A>G 367A>G), E110D (400G>C), K121I (405A>T), D115N (413G>A 415T>C), P135S (473C>T 475T>G), S157N (540G>A), V182I (614G>A 616G>A), I257L (839A>C), A332T (1064G>A), Q367K (1169C>A), D378E (1204C>G), V379A (1206T>C 1207A>T), G397S (1259G>A), I410M (1300A>G)									
CAG123AA (109G>A), GTC1257GAT (119C>T), TTG17CTG (119T>C), GAG202GAA (130G>A), ACT222ATT (136C>T), GTG23GTA (139G>A), GAT24GAC (142T>C), CCT31CCA (163T>A), GCC32GTC (166C>T), ATG35GAC (175T>C), AAG37AAG (181A>G), TGT40AGT (188T>C), ACT42ATC (195C>T 196T>C), CCT43TA (197C>T), CTC447CCG (211C>G), GAT48GAC (214T>C), TTA49TTG (217A>G), AAT50AAC (220T>C), GCA52GCT (226A>T), AA5454AA (232G>A), GTC56ATT (236G>A), TCA58TCC (244A>C), TGCG59GGA (245T>G 247C>A), AGC61AAT (252G>A 253C>T), GCG62GCA (256C>A), AAA646AA (262B>A), GAT66GAC (268T>A), GTC716TTG (283T>C), TTG72TCT (286C>T), TTG74CTA (290T>C 292G>A), GCG75GCA (295G>A), GCG76GCC (298G>C), TTT80TTT (310T>C), GGG83GGA (319G>A), AC848GTA (320A>G 321C>T), TG818TGG (325T>C), CCG86CCC (328G>C), GAA87GAT (331A>T), GTG95TTG (353G>T), ATT96ATA (358T>A), GAA99AGA (366A>G 367A>G), AAC1020AA (376G>A), AAC1040ACA (382G>A), TCT108CTT (394G>T), GAG110GAC (400G>C), AAA112ATA (405A>T), CTC113CGA (409T>A), GAT115AA (413G>A 415T>C), GTC116GTC (418A>G), GAA117GAG (421A>G), CGT122CTA (436G>A), GGA124GGS (442A>G), GGC125GGT (445C>T), GAA127GAG (451A>G), CGT128TTG (452C>A), TCT129GAC (457A>G), TGA129AAG (460A>G), GTC134GTT (472C>T), CCT135TGC (473C>T 475T>G), GAG136GAA (478G>A), GCG138CGA (484G>A), TCC139TCT (487C>T), TTA140TTG (490A>G), GTC141GTT (493C>T), CCT154TCT (532C>T), GGG155GGA (535G>A), CAA156GAG (538A>G), AGC157AAC (540G>A), ACT158ACC (544T>C), GGT159GGC (547T>C), AAC160AAT (550C>T), ATT165ATC (553T>C), GCA166GCT (568A>T), GAC167GAT (571C>T), AGG168AGA (574G>A), TTT173TCC (589T>C), CCT177CCG (601T>C), ATT1797GTA (607T>A), AAA180AAG (610A>G), GTG182ATA (614G>A 616G>A), AGA2101AAC (11720A>G), CAT2104GCA (11728A>G 11729T>A), AGG2105GGA (11730A>G), GTC2107TCC (11768T>C), TCC2117TCC (11768T>C), TCC2120TCT (11777C>T), ACT2121CTT (11780A>T), CTG2122TTC (11789C>T), AGT2125AGC (11792T>C), CTG2127TTC (11796C>T 11798G>A), TGC2128TAA (11800G>A 11810C>A), ATC2129ACT (11803T>C 11804C>T), GGA2130GAG (11806G>A 11807A>G), TAC2131CAC (11808T>C), TCC2132TCT (11813C>T), TGG2133CGA (11814T>C 11816G>A), AAC2134AGG (11818A>G), CCT2135AAT (11820C>A 11821C>A), GCC2136GTT (11824C>T 11825C>G), CAT2137AAG (11826C>A 11828T>G), GCT2138ACT (11829G>A), CTT2141CTC (11840T>C), GTG2142TGA (11841G>T 11842T>C 11843G>A), TGA2143CGA (11844T>C)									
Codon mutations:									
CTA220CTG (730A>G), GCA223CGC (739A>G), ATC224ATT (742C>T), GTG226GTA (748G>A), GCA228CGG (784G>A), CTG229TTG (785C>T), TCA241TCG (793A>G), ACT243ACA (797T>A), TTC245TT (805C>T), AAA227AAG (811A>G), ACT249AAT (817C>A), ACC252ACT (826C>T), GTC253GCC (829T>G), AT257CTA (839A>C), CTA258TTC (842C>T), AAG263AAA (859G>A), TTT265TCT (865T>C), GAG268GAA (874G>A), AGA271AGG (883A>G), CCA275CCG (895G>A), ACT279ACT (907A>T), GCT280GCA (910T>A), TCT284TCC (922T>C), TTC286TTT (928C>T), CAC288CAT (934C>T), TTC289PTT (937C>T), CTAA292TTG (944C>T 946A>G), AGG290GTC (950T>C), AGT295AGC (955T>C), AAA297AAC (961A>G), CTC299CCG (967T>G), AGA290TAC (970T>C), TCC304GCA (970C>T), AAC310AAC (1000T>C), CCT314TCT (10121T>C), GTC315GTT (1015T>C), TGC315TTG (1021C>T), GTC322GTT (1036C>G), AGA323AGG (1039A>G), CCT324TCT (1042C>T), AGC328ATA (1054G>A), ATT330ATA (1060T>C), GCA332ACA (1064G>A), GCT334GCC (1072T>C), CCT335CCG (1075T>C), GAA337GAG (1081A>G), ACTA41CTT (1093A>T), GGC343GTT (1099C>T), CTG345TTT (1103C>T), GAG346GGG (1108A>G), AAC348GAG (1118A>G), AAC368GAG (11174A>G), TAC369AT (11177C>T), GAG370GAA (11180G>A), GCG371GCA (11183G>A), CTG374TTG (11190C>T), GAC378GAG (11204C>G), GTC379GCT (1206T>C 1207A>T), GCA380GTC (1210A>T), CTG381TTG (1211C>T), GAT384GAC (1222T>C), AAC388AT (1234C>T), GAC390GAT (1240C>T), TCA396TCT (1258A>T), GGT397AGT (1259G>A), AAC398GAG (1264A>G), AGA400AGG (1270A>G), CCG402CTT (1276G>T), AAC403GAG (1279A>G), GCT404GCA (1282T>C), TAA406TAC (1288T>C), GCA408AGG (1292C>A 1294A>G), ATA410ATG (1300A>G), GGA413GG (1309A>G), CGA415AGA (1313C>A), TCG419TCA (1327G>A), CGG422AGG (1334C>A), TCA4426TG (1378C>T), CTA4427TTG (1394C>T 1396A>G), AAC443AAAT (1399C>T), TAT446TAC (1408T>C), TCA450TCG (1420A>G)									
phosphoprotein M1 (NP_056794.1)									
N29S (1598A>T 1599A>C), E42D (1639A>T), N48S (1656A>G), G54K (1673G>A 1674G>A 1675G>A), H57Q (1684G>A), D60N (1691G>A), K62R (1698A>G), S63P (1700T>C 1702G>A), P64S (1703C>T 1705C>T), N65G (1706A>G 1707A>G), P66L (1710C>T 1711T>C), V72A (1728T>C 1729G>A), G75S (1736G>A), K76R (1740A>G), Y77G (1742T>G 1743A>G), R78Q (1746G>A 1747A>G), G86A (1770G>C 1771A>G), S90A (1781A>G 1782G>C 1783C>T), H104M (1825A>G), Q107R (1833A>G), I108M (1837A>G), T121A (1874A>G 1876C>A), S145A (1946T>G 1948A>C), T149A (1958A>G), G150T (1961G>A 1962G>C), T158V (1985A>G 1986C>T), P159S (1985C>T 1986C>T), S140P (1931T>C 1933T>C), E142K (1937G>A 1939G>A), S145A (1946T>G 1948A>C), T149A (1958A>G), G150T (196									

	Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10	
Codon mutations:	ATC4ATT (1525C>T), GTC6GTT (1531C>T), AAT7AAC (1534T>C), CCT8CCA (1537T>A), GCT10GCA (1543T>C), AGA12AGG (1549A>G), GCC13GCA (1552C>A), CTG15TTG (1556C>T), GGC16GCA (1561C>A), CTT18CTA (1567T>A), GCT21GCA (1576T>A), GAA22GAG (1579A>G), GTT25GTC (1588T>G), CTG27CTA (1594G>A), ATC28ATT (1597C>T), AAT29CTT (1598A>C), AGA30AGG (1603A>G), ATT31AAC (1606T>C), GAA33GAG (1612A>G), GAC34GAT (1615C>T), GCT37CGC (1624T>G), GGG41GAA (1636G>A), GAA42AGT (1639A>T), GAA45AG (1648A>G), AAT48AGT (1656A>G), CTC49CTC (1660C>T), GAG51GAA (1666G>A), GGG54GAA (1673G>A), 1675G>A), CAC57CAA (1684C>A), CTG58TTA (1685C>T), GAT59GAC (1690C>T), GAT60AA (1691G>A), GGA61GAA (1695G>A), AAA62AGA (1698G>A), TCG63CCA (1700T>C) 1702G>A), CCC64CT (1703C>T), AAC65GCG (1706A>G), 1707A>G), CTC66CTC (1710C>T) 1711C>A), GGT67GCG (1714T>C), AGA71GAA (1726G>A), GTG72GCA (1728T>C) 1729G>A), GGA73GGG (1732A>G), GAA74GAG (1735A>G), GGC75AGC (1736G>A), AAG78AGG (1740A>G), TAT77GGT (1742T>G) 1743A>G), CGA78CAG (1746G>A) 1747A>G), GAG79GAA (1750G>A), CAG82CAA (1759G>A), GAA85GAG (1768A>G), GGA86GCG (1770G>C) 1771A>G), GAT88GAC (1777T>C), CCT89CCG (1780T>C), AGC90GCT (1781A>G) 1782G>C) 1783C>T), CTG92TTG (1787C>T), TCA95TGC (1798A>G), GAC98GAT (1807C>T), GTT100GTC (1813T>C), GTC120GTT (1819C>T), CAAC103CAG (1822A>G), ATA104AGT (1825A>G), CAA107CGA (1833A>G), ATA108ATG (1837A>G), TTT114TTC (1855T>C), TCA119TCT (1870A>G), GAG120CAA (1873G>A), ACC121GCA (1874A>G) 1876C>A), GTA122GTT (1879A>T), GAA123GAG (1882A>G), GAG124GAA (1885G>A), ATT125ATC (1888T>C), CGC130A (1901G>A), GTC131GCC (1905T>C), AAC132AA (1909C>T), TTT133TTC (1912T>C), AAC135AGT (1917A>G) 1918C>T), CTC136CAG (1920A>C) 1921T>G), CCA137TCC (1922C>T) 1924A>G), GGA138GGG (1927A>G), TCT140CCC (1931T>C) 1933T>C), GAC142AAA (1937C>A) 1939G>A), GAT143GAC (1942T>C), TCA145GCC (1946T>G) 1948A>G), ACC149GCC (1958A>G), CGC150AAC (1961G>A) 1962G>C), CGA151AGG (1964C>A) 1966A>G), GAG152GAA (1969G>A), ACA158GTA (1985A>G) 1986C>T), CCC159TCC (1988C>T), ACT160GCC (1991A>G) 1993T>C), CCT161CCT (1995C>C), GCA163GAA (2002G>C), GAA165GCA (2008A>G), AGC166AAC (2010G>C), TCA168CCA (2015T>C) 2017C>A), TCG169CTC (2020C>C), GGC171AAC (2024G>A), AGG172AAC (2028G>C), ACT177AAC (2044T>C), GCT178GCC (2047T>C), TCT179TCC (2050T>C), GGC180GPT (2053C>T), CCA182CCC (2059A>C), CGC183GCT (2062C>T), CTT184CTA (2065T>A), GAA185GAG (2068A>G), TCG181TCT (2074G>T), GCC188GTC (2077C>T), ACC189GCC (2078A>G), ATT190AAC (2083T>C), GAT193GAC (2092T>C), GAT194GAC (2095T>C), CTA195CCA (2097T>C), TCA196TCT (2101A>G), GTG197GTC (2104G>A), GAG198GAT (2107G>T), GAG200GAA (2113G>A), GCT202GCC (2119T>C), CAC203CAT (2122C>T), GCA206GCT (2131A>T), AGT208AGC (2137T>C), AAA211AG (2146A>G), AAA212AG (2149A>G), TAT213TAC (2152T>C), AAC214AA (2155G>A), CGA218AGA (2165C>A), TCC219CTA (2170C>A), CTC223TTC (2180C>T), CAA229CG (2200A>G), TTG230TTA (2203G>A), GAT236GAC (2221T>C), GTC238GTC (2227T>C), CGC241TCA (2234G>T), GTG246AGC (2249G>A) 2251T>C), GTG247GTA (2254G>A), ACC248ATC (2256C>T), CGT249GCG (2262D>T), TTG250TTG (2263A>G), CGT252CAC (2268G>A) 2269T>C), GAC253GAT (2272C>T), AAA256AGA (2280A>G), CTC258CT (2287C>T), CTG259CTG (2290A>G), GTA262GTC (2299A>G), GTC266GTT (2311C>T), GGC267CT (2314C>T), TTG268CTA (2315T>C) 2317G>A), AAC270AAT (2323C>T), TCT271TCC (2326T>C), AAC272AAA (2329G>A), AAA273AG (2332A>G), TTG276CTG (2339T>C), TTA277TTG (2344A>G), GTC278GTC (2347C>G), GAA279GAG (2350A>G), TCC280CCC (2351T>C), AAC281GAC (2354A>G), AAC282AAA (2359G>A), CTG283CTA (2362G>A), AGT284AT (2364G>A), ATC286ATA (2371C>A), TGT291CTG (2384T>C), AAT292AAC (2389T>C), CGC293CGT (2392C>T), ACA295TCA (2396A>T), TCT296TTC (2400C>T) 2401T>C), TCG297TCT (2402C>T) 2403G>T) 2404C>T), TA2987GAA (2406A>G)								
M2 protein (NP_056795.1)	1	203	100%	1355	91.8%	203 (100%)	185 (91.1%)	0/0/0/0	1
Protein mutations:	P21F (2556C>T) 2557C>T), L26P (2572T>C) 2573G>A), R50M (2644G>T), I55V (2658A>G), G58E (2668G>A) 2669G>A), G70R (2703G>A), R77K (2725G>A), H87Q (2756T>A), V90I (2763G>A) 2765G>T), I97V (2784A>G) 2786T>C), N147D (2934A>G) 2936T>C), V151I (2946G>A), Q154E (2955C>G), K160R (2974A>G), R165Q (2989G>A), G178C (3027G>T), Q187K (3054C>A) 3056G>A), L199V (3090C>G) 3092G>A)								
Codon mutations:	CGT5CCG (2510T>C), GTG8GTA (2519G>A), AAA9AAG (2522A>G), AAT10AAC (2525T>C), TGC11TGT (2528C>T), AGG12AGA (2531G>A), GAC13GAT (2534C>T), GAG14GAA (2537G>A), AAA18AGA (2549A>G), TCT20TCC (2555T>C), CCC21TTC (2556C>T) 2557C>T), TCA23TGC (2564A>G), GCC24GCT (2567C>T), CTG26CMA (2572T>C) 2573G>A), GAC28GAT (2579C>T), CTT33TTC (2592C>T) 2594T>A), CCA34CCC (2597A>C), CCC35CCC (2600C>T), CTC36CCA (2603A>T), TAC38TAT (2605C>T), CTC39GTC (2612C>T), AAA42AGA (2621A>G), GAA43GAG (2624A>G), CTT44CTC (2627T>C), AA46GAAA (2636G>A), AGG50ATG (2644G>T), AGG51GAA (2648G>A), TGT54TGC (2657T>C), ATC55GTC (2658A>G), AAC56AAT (2663G>C), GGG58GAA (2668G>A) 2669G>A), AAA60AAG (2675A>G), TGT62TGC (2681T>C), AGC63GAT (2684C>T), CGC64GCA (2687G>A), AAC765AAC (2690T>C), CGT66GGC (2693C>T), TAC67TAT (2696C>T), TCG68CTA (2699A>G), TTC69TTT (2702C>T), GGG70AAG (2703G>A), CTG76TTG (2721C>T), AGA77AAG (2725G>A), GAC80GAT (2735C>T), ATA82ATC (2741C>A), GGG85GCA (2750G>A), CTC82A (2756T>A), AGG88AGA (2759G>A), GTC90ATT (2763G>A) 2765C>T), GGG91GGA (2768G>A), TTA92TTG (2771A>G), GTA95GTC (2780A>T), GTG96GTC (2783T>C), ATT97GTC (2784A>G) 2786T>C), CTG99TTC (2790C>T), GTC100GCA (2795A>T), GGA103GCG (2804A>G), GCT104GCC (2807T>C), CCT107CCA (2816T>A), AAC111AAT (2828C>T), TTC122TTT (2861C>T), TCC127TCT (2867C>T), CTC131CTA (2888T>A), CAG140CAA (2915G>A), GAG141GAA (2918G>A), ATC142ATT (2921C>T), ACT143AAC (2924T>C), AAC174GAC (2934T>C) 2936T>C), GTC150ATT (2942G>A), TTC150TT (2945C>T), GTC151ATC (2946G>A), CA154GAA (2955C>G), AGA156GCA (2961A>G), AAC160AAG (2974A>G), CAG161CAA (2978G>A), TGT162TGC (2981T>C), ATC164ATT (2987C>T), CGG165GAC (2989G>A), AGA167AGG (2996A>G), ATC168ATT (2999C>T), ATC171AT (3008C>T), AAC174ATT (3017C>T), TCG175TCT (3020G>T), AGA176GG (3021A>G), CTC203A (3023A>G), GCA177GCG (3026A>G), GGT178TGT (3027G>T), CTAT180TTG (3033C>T) 3035A>T), AAC185TCC (3050T>C), CTG186TCT (3053T>A), CAG187AAA (3054C>A) 3056G>A), TCC191TCT (3068C>T), GAA192GAG (3071A>G), GAC194GAT (3077C>T), GAT196GAC (3083T>C), TCC197TCT (3086C>T), TCT198TCA (3089T>A), CTG199GTA (3090C>G) 3092G>A), CTT200CTC (3095T>C), CTA201CTT (3098A>T), TAA203TAG (3104A>G)								
transmembrane glycoprotein G (NP_056796.1)	1	525	100%	3315	87.2%	525 (100%)	452 (86.1%)	0/0/0/0	1
Protein mutations:	V21 (3321G>A) 3323T>C), F8L (3339T>C) 3341T>G), L12V (3351C>G), V13I (3354G>A) 3356T>C), F14S (3358T>C) 3359T>C), P15S (3360C>T), F18L (3369T>C) 3371T>C), N56S (3484A>G) 3485C>T), M75V (3540A>G), T109M (3643C>T) 3644A>G), P110S (3645C>T), M121V (3678A>G), H132Q (3713C>A), V152I (3771G>A), L161M (3798T>A), R166K (3814G>A), H169R (3823A>G) 3824C>T), V172I (3831G>A) 3833C>T), N177K (3848T>G), S179L (3853C>T) 3854T>G), V181 (3858G>A), N201E (3918G>A) 3920T>A), P202A (3932C>G) 3933G>A), G205E (3931G>A), M206T (3934T>C) 3935C>A), R215K (3961G>A), S223G (3984G>A) 3986T>C), E224K (3987G>A), T225I (3991C>T), K243R (4004A>G) 4046G>A), R249I (4016G>A), R283H (4026G>A), TTA92TTG (2771A>G), GTC95GTC (2780A>T), GTT96GTC (2783T>C), ATT97GTC (2784A>G) 2786T>C), CTG99TTC (2790C>T), GTC100GCA (2795A>T), GGA103GCG (2804G>A), GCT104GCC (2807T>C), CCT107CCA (2816T>A), AAC111AAT (2828C>T), TTC122TTT (2861C>T), TCC127TCT (2867C>T), CTC131CTA (2888T>A), CAG140CAA (2915G>A), GAG141GAA (2918G>A), ATC142ATT (2921C>T), ACT143AAC (2924T>C), AAC174GAC (2934T>C) 2936T>C), GTC150ATT (2942G>A), TTC150TT (2945C>T), GTC151ATC (2946G>A), CA154GAA (2955C>G), AGA156GCA (2961A>G), AAC160AAG (2974A>G), CAG161CAA (2978G>A), TGT162TGC (2981T>C), ATC164ATT (2987C>T), CGG165GAC (2989G>A), AGA167AGG (2996A>G), ATC168ATT (2999C>T), ATC171AT (3008C>T), AAC174ATT (3017C>T), TCG175TCT (3020G>T), AGA176GG (3021A>G), CTC203A (3023A>G), GCA177GCG (3026A>G), W408E (4045T>C) 4046A>G), D409N (4062G>A), L416M (4103C>T), M417V (4170C>T), A464I (4164G>A) 4164G>T), E444K (4156G>A), R483K (4165G>A), R484K (4167G>A), F485T (4173G>C), G486T (4177G>C), I487T (4181A>T), Q489L (4785C>A) 4787A>G), H491Q (4790C>A), N492G (4791A>G), P479A (4792C>A), M471V (4793C>A), G479P (4794C>A), T481R (4795C>A), G482R (4796C>A), T483R (4797C>A), G484R (4798C>A), G495E (4801G>A), T496S (4803A>T), G497R (4806G>A) 4808G>A), E499K (4812G>A) 4814G>A), S506N (4834G>A), L509V (4842A>G), S515L (4860T>C) 4861C>T), G523K (4884G>A) 4885G>A) 4886A>G)								
Codon mutations:	GTT2ATC (3321G>A) 3323T>C), CTC6CTG (3335C>T), GTG7CTA (3338G>A) 3341T>G), GTAG9TG (3344A>G), CCC10CCT (3347C>T), CTT11CTC (3350T>C), CTG12GTC (3351C>G), GTC13ATC (3354G>A) 3356T>C), TTT14TCC (3358T>C) 3359T>C), CA15TCA (3360C>T), TTT18CTC (3369T>C) 3371T>C), CCT22CCC (3383T>C), ATT23ATC (3386T>C), CTT30CTC (3407T>C), GGT31GCG (3410T>C), CCC32CTC (3413C>T), AGC34AGT (3419C>T), CCG35CCC (3422G>C), ATT36ATC (3425T>C), GAC37GAT (3428C>T), CAC40ATC (3437C>T), TCG43TGT (3446C>T), CCA44CTC (3449A>T), GAT48GTT (3461A>T), GA52GAG (3473A>G), GGA53GG (3476A>G), ACC55CAT (3482C>T), AAC56AGT (3484A>G) 3485C>T), TTG60TTT (3497C>T), TCC60TTT (3500C>T), CTT65CTC (3512T>C), GAA66A6A (3518A>G), TGT67GTA (3518T>C), AAC74AG (3539A>G), ATG75GTC (3540A>G), TGC820TGT (3557C>T), AAC81ACC (3560A>G), GGC82GGT (3563C>T), AGC858ACA (3572G>A), GAG86GAA (3575G>A), GTC90AT (3587C>T), ACT91ACC (3590T>C), TCT93TTC (3596C>T), AAC89AGC (3611G>A), AGC102AAG (3623A>G), AAC104AA (3629G>A), CAT105CAC (3632T>C), TTC106TTT (3635C>T), ACA109ATG (3643C>T) 3644A>G), CCA110TCA (3645C>T), GTC113TGC (3656T>C), GGC115GCT (3662C>T), GCG116GCT (3665G>T), ATG121GTC (3678A>G), CCG125CT (3692C>T), CTA131CTC (3710A>T), CAC132CA (3713C>A), TAC135AT (3722C>T), GAC137CTG (3728C>T), CAC139CT (3734C>T), CGC142CCG (3743A>G), GTC144GTC (3749A>G), AAA145AGG (3752A>G), AAG148AAA (3761G>A), TCT150TCC (3767T>G), CTG151CTT (3770C>T), GTT152ATT (3771G>A), CGA159GCT (3794A>G), TAT160GAC (3797T>C), TGT161ATG (3798T>A), GAC162GAT (3803C>T), CAA163CCC (3806A>C), TAT164TAC (3809T>C), AGA166AAA (3814G>A), TGT168CTG (3815C>T), AAC167GAC (3816A>G), AAC168AAA (3818G>A), AAC169GAC (3820C>T), AAC170GAC (3821T>C), AAC169GCG (3823A>G) 3824C>T), CGC170TCA (3827G>C), AGG171GAA (3830G>A), AAC172ATT (3832G>C), AAC173GAC (3833G>A), AAC174GAC (3834C>A), AAC175GAC (3835C>A), AAC176GAC (3836C>A), AAC177GAC (3837C>A), AAC178GAC (3838C>A), AAC179GAC (3839C>A), AAC180GAC (3840C>A), AAC181GAC (3841C>A), AAC182GAC (3842C>A), AAC183GAC (3843C>A), AAC184GAC (3844C>A), AAC185GAC (3845C>A), AAC186GAC (3846C>A), AAC187GAC (3847C>A), AAC188GAC (3848C>A), AAC189GAC (3849C>A), AAC190GAC (3850C>A), AAC191GAC (3851C>A), AAC192GAC (3852C>A), AAC193GAC (3853C>A), AAC194GAC (3854C>A), AAC195GAC (3855C>A), AAC196GAC (3856C>A), AAC197GAC (3857C>A), AAC198GAC (3858C>A), AAC199GAC (3859C>A), AAC200GAC (3860C>A), AAC201GAC (3861C>A), AAC202GAC (3862C>A), AAC203GAC (3863C>A), AAC204GAC (3864C>A), AAC205GAC (3865C>A), AAC206GAC (3866C>A), AAC207GAC (3867C>A), AAC208GAC (3868C>A), AAC209GAC (3869C>A), AAC210GAC (3870C>A), AAC211GAC (3871C>A), AAC212GAC (3872C>A), AAC213GAC (3873C>A), AAC214GAC (3874C>A), AAC215GAC (3875C>A), AAC216GAC (3876C>A), AAC217GAC (3877C>A), AAC218GAC (3878C>A), AAC219GAC (3879C>A), AAC220GAC (3880C>A), AAC221GAC (3881C>A), AAC222GAC (3882C>A), AAC223GAC (3883C>A), AAC224GAC (3884C>A), AAC225GAC (3885C>A), AAC226GAC (3886C>A), AAC227GAC (3887C>A), AAC228GAC (3888C>A), AAC229GAC (3889C>A), AAC230GAC (3890C>A), 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(3938C>A), AAC279GAC (3939C>A), AAC280GAC (3940C>A), AAC281GAC (3941C>A), AAC282GAC (3942C>A), AAC283GAC (3943C>A), AAC284GAC (3944C>A), AAC285GAC (3945C>A), AAC286GAC (3946C>A), AAC287GAC (3947C>A), AAC288GAC (3948C>A), AAC289GAC (3949C>A), AAC290GAC (3950C>A), AAC291GAC (3951C>A), AAC292GAC (3952C>A), AAC293GAC (3953C>A), AAC294GAC (3954C>A), AAC295GAC (3955C>A), AAC296GAC (3956C>A), AAC297GAC (3957C>A), AAC298GAC (3958C>A), AAC299GAC (3959C>A), AAC300GAC (3960C>A), AAC301GAC (3961C>A), AAC302GAC (3962C>A), AAC303GAC (3963C>A), AAC304GAC (3964C>A), AAC305GAC (3965C>A), AAC306GAC (3966C>A), AAC307GAC (3967C>A), AAC308GAC (3968C>A), AAC309GAC (3969C>A), AAC310GAC (3970C>A), AAC311GAC (3971C>A), AAC312GAC (3972C>A), AAC313GAC (3973C>A), AAC314GAC (3974C>A), AAC315GAC (3975C>A), AAC316GAC (3976C>A), AAC317GAC (3977C>A), AAC318GAC (3978C>A), AAC319GAC (3979C>A), AAC320GAC (3980C>A), AAC321GAC (3981C>A), AAC322GAC (3982C>A), AAC323GAC (3983C>A), AAC324GAC (3984C>A), AAC325GAC (3985C>A), 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(4033C>A), AAC374GAC (4034C>A), AAC375GAC (4035C>A), AAC376GAC (4036C>A), AAC377GAC (4037C>A), AAC378GAC (4038C>A), AAC379GAC (4039C>A), AAC380GAC (404								

	Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10	
L2I (5421C>A), E6D (5435G>T), L17S (5467T>C), A19T (5472G>A), P21T (5478C>A), V27I (5496G>A 5498C>T), P46S (5553C>T 5555T>A), R48K (5560G>A), Y61P (5598T>C 5599A>C 5600T>C), F73Y (5635T>A 5636C>T), R74K (5638G>A), Y79S (5653A>G 5654T>C), M93A (5694A>G 5695T>C 5696G>T), L103I (5724T>A), R115K (5761G>A 5762A>G), I117M (5768A>G), T118I (5770C>T 5771A>C), H122Q (5783T>G), L136C (5823C>T 5824T>G), E148N (5859G>A 5861G>T), S152N (5872G>A), N161G (5898A>G 5899A>G 5900T>G), T170I (5926C>T 5927G>A), K193R (5995A>G), K200R (6016A>G 6017A>G), V205T (6030G>A 6031T>C 6032G>A), I207V (6036A>G 6038C>T), L221S (6078C>T 6079T>C), L222M (6081C>A), S23R (6114A>C), N235G (6120A>G 6121A>G 6122T>C), V259I (6192G>A 6194C>T), Q285H (6272A>T), K331R (6409A>G), S335G (6420A>C), E339C (6433A>G 6434G>A), S343P (6444T>C 6446C>T), C344S (6447T>A), R346K (6454G>A), R350Q (6465A>C 6466G>A), A351T (6468G>A), I391L (6588A>C 6590T>C), F428L (6699T>C), A430S (6705G>T 6707C>G), R431K (6708C>A 6709G>A), T436I (6724C>T), I449V (6762A>G 6764T>A), R672W (7431C>T), D674N (7437G>A), Q675R (7441A>G), A681M (7458G>A 7459C>T), I717I (7567T>C), V724I (7587G>A), Q745R (7650C>A 7651A>G), F760L (7695T>C 7697T>C), W766I (7713G>A), E768D (7721A>T), V815I (7860G>A), E882C (8063G>C), S883N (8065G>A 8066C>T), H933N (8214C>A), I937V (8226A>G), R970K (8326G>A), T1018P (8470C>A), K1059R (8593A>G), K1063R (8605A>G), S1078N (8650G>A 8651T>C), G1089R (8682G>A), T1133A (8814A>G), A1136T (8823G>A), T1137A (8826A>G 8828A>G), G1138E (8830G>A), G1140E (8836G>A 8837C>G), V1144I (8847G>A 8849T>A), Q1154P (8878A>C), C1158S (8890G>C 8891C>G), T1159R (8893C>G 8894G>A), D1206N (9033G>A 9035T>C), V1218M (9069G>A), S1219A (9072T>G), Q1276H (9245A>T), K1279R (9253A>G 9254G>A), R1307K (9337G>A 9338A>G), Q1316R (9364A>G), R1319K (9373G>A), I1334V (9417A>G), E1336D (9425G>T), K1342R (9442A>G), Q1356R (9483C>A 9484A>G 9485G>A), R1357K (9487G>A 9488G>A), I1361V (9498A>G 9500C>T), R1374K (9538G>A), H1378R (9550A>G), G1411S (9648G>A), F1476L (9843T>C 9845T>G), E1478G (9850A>G), I1487V (9876A>G), V1516A (9964T>C), A1535S (10020G>T 10022C>T), V1554I (10077G>A 10097T>A), R1556K (10084G>A 10085A>G), D1564A (10108A>C 10109T>C), L1569M (10122T>A), D1583E (10166T>A), E1586D (10175G>T), D1589E (10184C>A), N1590D (10185A>G), R1603K (10225G>A 10226A>G), D1619G (10273A>G), N1623S (10285A>G 10286C>T), V1626M (10293G>A), V1630A (10306T>C), A1648S (10359G>T 10361A>G), V1653A (10375T>C), K1663R (10405A>G 10406G>A), R1664K (10408G>A), F1665L (10410T>C 10412C>T), R1749S (10664G>C), N1752D (10671A>G), V1755I (10680G>A), I1759I (10692A>G 10694A>T), R1772K (10732G>A), A1775T (10740G>A 10742T>C), K1778R (10750A>G 10751A>G), K1785E (10770A>G 10772G>A), Q1786R (10774A>G 10775G>T), A1817V (10867C>T 10868A>G), L1818M (10869T>A), N1839D (10932A>G), K1841R (10939A>G 10940G>A), V1860T (10995G>A 10996T>C 10997A>G), E1924D (11189A>T), A1966S (11313G>T), T1987I (11377C>T), P2021S (11478C>T 11480T>C), V2042I (11541G>A), L2044Q (11548T>A 11549A>G), N2046S (11554A>G 11555C>T), N2055D (11580A>G 11582C>T), S2091N (11689G>A), K2093E (11694A>G 11696G>A), S2096P (11703T>C), G2097R (11706G>A 11708A>G), R2101K (11719G>A 11720A>G), H2104R (11728A>G 11729T>A), R2105G (11730A>G), E2113D (11756G>T), N2114D (11757A>G 11759T>C), C2128* (11800G>A 11801C>A), I2129T (11803T>C 11804C>T), G2130E (11806G>A 11807A>G), Y2131H (11808T>C), W2133R (11814T>C 11816G>A), K2134R (11818A>G), P2135N (11820C>A 11821C>A), A2136V (11824C>T 11825C>G), H2137K (11826C>A 11828T>G), A2138T (11829G>A), V2142* (11841G>T 11842T>G 11843G>A), *2143R (11844T>C)	Protein mutations:								

Begin	End	Coverage	Score	Concordance	Matches	Identities	I/D/M/F*	Stop Codons
NT	1	11932	100%	14569	61.2%	11922 (99.9%)	9616 (80.6%)	5/10
CTC2ATC (5421C>A), CCT4CCA (5429T>A), GAG6GAT (5435G>T), GTC7GTT (5438C>T), CCT11CCC (5450T>C), GAC13GAT (5456C>T), CCA14CCT (5459A>T), ATC15ATT (5462C>T), TTA17TCA (5467T>C), GCT19ACT (5472G>A), GAA20GAG (5477A>G), CCC21ACG (5478C>A), GGA23GGG (5486A>G), ACC24AAC (5488C>A), CCC25CCT (5492C>T), ACT26AAC (5495T>C), GTC27ATT (5496G>A, 5498C>T), TTG31TAA (5510G>A), AGG32AGA (5513G>A), TCT40TCC (5537T>C), TTG42TTA (5543G>A), GAA44GAG (5549A>G), CCT46TCA (5553C>T, 5555T>A), AGA48AAA (5560G>A), TTA51TTG (5570A>G), TTA54CTG (5577T>C, 5579A>G), GGG57GGA (5588G>A), AGA59AGG (5594A>G), TAT61CCC (5598T>C, 5599A>G, 5600T>C), CGG62CGT (5603G>T), CTAG65CTG (5612A>G), TCC70TCT (5627T>C), TCT72TCC (5633T>C), TTC73STAT (5635T>A, 5636C>T), AGA74AAA (5638G>A), CTT75GTC (5642T>C), TAT79TGC (5653A>C, 5654T>C), AGA82AA (5656G>A), TTA85CTG (5670T>C, 5672G>T), GTG86GGA (5675T>A), TCC87TCT (5678T>C), GGA92GGG (5693A>G), ATG93GCT (5694A>G, 5695T>C, 5696G>T), GCT94GCA (5699T>A), Gac96CAA (5705G>A), TCA97TCT (5708A>T), TCT100TCC (5717T>C), CTIC101CTT (5720C>T), TTAA103ATA (5724T>A), TAT104TAC (5729T>C), CCTC110TCG (5747C>G), AGA115AA (5761G>A, 5762A>G), TCA117ATG (5768A>G), ACA118ATC (5770C>T, 5771A>C), GAC119GAT (5774C>T), GGC121GCT (5780C>T), CAT122CAC (5783T>C), TCG127TCT (5798G>T), CCC129CC (5804C>T), GAG131GAA (5810G>A), AAC132AAA (5813G>A), TTA134TTG (5819A>G), AAT135AAC (5822T>C), CTIC136TGC (5823C>T, 5824T>C), AGC137ACA (5828G>A), CTAC138CTC (5831A>C), GGA139GGG (5834A>G), CTG143CTT (5846G>T), GAG148AAT (5859G>A, 5861G>T), GGA149GGG (5864A>G), GTG150GTC (5867G>C), TTA151CTA (5868T>C), AGT152AAT (5872G>A), TGC153TGT (5876C>T), GAG155GAA (5882G>A), TAT159TAC (5894T>C), ATT161GGG (5898A>G, 5900T>C), GGA164GGG (5909A>G), AGC165GCA (5910A>C, 5912G>A), CTT167GTC (5918T>G), GCC168GCT (5921C>T), AGC170ATA (5926C>T, 5927G>A), TAT171TAC (5930T>C), TAC174TAT (5939C>T), TTG175CTG (5940T>C), TTC177TTT (5948C>T), GTA179GTC (5954A>G), TTA182CTC (5961T>C, 5963A>C), TAC183TAT (5966C>T), CTAC187TTG (5976C>T), GAC188GAT (5981C>T), GAA191GAG (5990A>G), GAA192GAG (5993A>G), AAG193AGG (5995A>G), ATC195ATA (6009T>C), AAA200AGG (6016A>G, 6017A>G), GTG205ACA (6030G>C, 6031T>C, 6032G>A), ATC207GTT (6036A>G, 6038C>T), GTA219GTC (6053A>C), TTC214TTT (6059C>T), GAC216GAT (6065C>T), CTG221TCTG (6078T>C, 6079T>C), TTG222ATC (6081C>A), ATC223ATT (6086C>T), ACA225ACC (6092A>C), GAC227GAT (6098C>T), TTG229GAT (6104T>A), AGT233GTC (6114A>C), TCC234TCT (6119C>T), AT235GCG (6120A>C, 6121A>G, 6122T>C), CTT237CTC (6128T>C), GAC239GAT (6134C>T), AAC241AAAT (6140C>T), TAC242AT (6143C>T), CCT244CTC (6149T>C), AAA247AAG (6158A>G), CTT249CTC (6164T>C), CGC253CGG (6176C>G), TTC254TTT (6179C>T), TCC256TCT (6185C>T), TTA257CTA (6186T>C), GTC259TT (6192G>A, 6194C>T), TTA260CTT (6195T>C, 6197A>T), CCC263CCT (6206C>T), GAG265GAA (6212G>A), CGA267AGC (6216C>T, 6218A>G), TAC268AT (6221C>T, 6222A>G), TCA276CTG (6245A>G), TAC280TAT (6257C>T), ATT281ATC (6260T>C), GTC282CCG (6263T>G), GGG283GGC (6266G>C), AAC285CAT 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*: Inserts / Deletes / Misaligned / Frameshifts

Analysis details

This analysis was performed with Pan-viral (2.14.6)