

Sequences - Supplementary Data S1

Wildtype PCV2b 41513 ORF2 DNA

ATGACGTATCCAAGGAGGCGTTACCGGAGAAGAAGACACCGCCCCCGCAGCCATCTTGGCCAGATCC
TCCGCCGCCGCCCTGGCTCGTCCACCCCGCCACCGTTACCGCTGGAGAAGGAAAAATGGCATCTTC
AACACCCGCCTATCCCGCACCTTCGGATATACTATCAAGCGAACCACAGTCAGAACGCCCTCCTGGGC
GGTGGACATGATGAGATTCAATATTAATGCCTTTCTTCCCCCAGGAGGGGGCTCAAACCCCGCTCTG
TGCCCTTTGAATACTACAGAATAAGAAAGGTTAAGGTTGAATTCTGGCCCTGCTCCCCGATCACCCAG
GGTGACAGGGGAGTGGGCTCCAGTGCTGTTATTCTAGATGATAACTTTGTAACAAAGGCCACAGCCCT
CACCTATGACCCCTATGTAACTACTCCTCCCGCCATACCATAACCCAGCCCTTCTCCTACCACTCCCG
CTACTTTACCCCCAAACCTGTACTAGATTCCACTATTGATTACTTCCAACCAACAACAAAAGAAACC
AGCTGTGGCTGAGACTACAACTGCTGGAAATGTAGACCACGTAGGCCTCGGCACTGCGTTCGAAAA
CAGTATATACGACCAGGGATACAATATCCGTGTAACCATGTATGTACAATTAGAGAATTTAATCTTA
AAGACCCCCCACTTAACCCTTAA

sPCV2-Vac ORF2 DNA with mutated serine and leucine codons in small letters

ATGACGTATCCAAGGAGGCGTTACCGGAGAAGAAGACACCGCCCCCGCAGCCATCTTGGCCAGATCtt
aCGCCGCCGCCCTGGttGTCCACCCCGCCACCGTTACCGCTGGAGAAGGAAAAATGGCATCTTCAA
CACCCGcttatcaCGCACCTTCGGATATACTATCAAGCGAACCACAGTCAGAACGCCctgTGGGCGGTGG
ACATGATGAGATTCAATATTAATGCCTTTtgCCCCCAGGAGGGGGCTCAAACCCCGCtcaGTGCCCTTT
GAATACTACAGAATAAGAAAGGTTAAGGTTGAATTCTGGCCCTGctcaCCGATCACCCAGGGTGACAG
GGGAGTGGGctgctcaGCTGTTATTtgGATGATAACTTTGTAACAAAGGCCACAGCCttaACCTATGACCCC
TATGTAACTACTcatcgCGCCATACCATAACCCAGCCCTTctgTACCActcaCGTACTTTACCCCCAAAC
CTGTAttaGATtcaACTATTGATTACTTCCAACCAACAACAAAAGAAACCAGttgTGgtgAGAttaCAAAC
GCTGGAAATGTAGACCACGTAGGcttgGGCACTGCGTTCGAAAACAGTATATACGACCAGGGATACAA
TATCCGTGTAACCATGTATGTACAATTAGAGAATTTAATCTTAAAGACCCCCCACTTAACCCTTAA

PCV2b 41513 ORF2 protein – wildtype and mutated sequence

MTYPRRRYRRRRHRPRSHLGQILRRRPWLHPRHRYRWRRKNGIFNTRLSRTFGYTIKRTTVRTPSWAVDM
MRFNINAFLLPPGGGSNPRSVPFYYRIRKVKVEFWPCSPITQGDGRGVGSSAVILDDNFVTKATALTYDPYVNY
SSRHTITQPFYSYHSRYFTPKPVLSTIDYFQPNNKRNLWLRLQTAGNVDPVGLGTAFENSIYDQGYNIRVT
MYVQFREFNLKDPPLNP

Sequencing of samples passaged under selection pressure

S PCV2-Vac DNA sequence

ATGACGTATCCAAGGAGGCGTTACCGGAGAAGAAGACACCGCCCCCGCAGCCATCTTGGCCAGATCt
GagGCCGCCGCC
CTGGtggGTCCACCCCGCCACCGTgACCGCaGGAGAAGGAAAAATGGCATCTTCAACACCCGctGatGa
CGCACCTTCG
GATATACTAcCAAGCcgACCACAGTCAGAACGCCctGgTGGGCGGTGGACATGATGAGATTCAATATTA
cTGctTTTtAg
gCCCCAcGAGGGGGCTcGAACCCCGctAaGTGCCCTTTGAATACTACAGAATAAGAAAGGTTAAGGTT
GAATTCTGGCC
CTGctcaCCGATCACCCAGGGTGACAGGGGAGTGGGctgctcaGCTGTTATTtgGATGATAACTTTGTAACA
AAGGCCA

CAGCCttaACCTATGACCCCTATGTAAACTACtcatcgCGCCATACCATAACCCAGCCCTTCtgTACCACtca
CGCTAC
TTTACCCCCAAACCTGTAttaGATtcaACTATTGATTACTTCCAACCAAACAACAAAAGAAACCAGttgTGG
ttgAGAtt
aCAAACCTGCTGGAAATGTAGACCACGTAGGCttgGGCACTGCGTTCGAAAACAGTATATACGACCAGG
GATACAATATCC
GTGTAACCATGTATGTACAATTCAGAGAATTTAATCTTAAAGACCCCCCACTTAACCCTTAA_

S PCV2-Vac Protein sequence

MTYPRRRYRRRRHRPRSHLGQI.GRRPWWVHPRHRDRRRRKNIGFNR..RTFGYTTKPTTVRTPWWAVDM
MRFNITAF.
APRGGSNPR.VPFEYYRIRKVKVEFWPCSPITQGDRGVGSSAVILDDNFVTKATALTYDPYVNYSSRHITITQPF
YHSRY
FTPKPVLSTIDYFQPNKRNQLWLRLQTAGNVHDVGLGTAFENSIYDQGYNIRVTMYVQFREFNLKDPPL
NP_

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Wildtype NGS sequencing

Wildtype: Only 3 mutations, two silent, and 1 Leu to Val were detected.

Wildtype PCV2b 41513 ORF2 DNA sequence

ATGACGTATCCAAGGAGGCGTTACCGGAGAAGAAGACACCGCCCCCGCAGCCATCTTGCCAGATCC
TCCGCCGCCGCC
CTGGCTCGTCCACCCCGCCACCGTTACCGCTGGAGAAGGAAAAATGGCATCTTCAACACCCGCCTAT
CCCGCACCTTCG
GATATACTATCAAGCGAACCACAGTCAGAACGCCCTCCTGGGCGGTGGACATGATGAGATTCAATATT
AATGCTTTTCTT
CCCCCAGGAGGGGGCTCAAACCCCGCTCTGTGCCCTTTGAATACTACAGAATAAGAAAGGTTAAGG
TTGAATTCTGGCC
CTGCTCCCCGATCACCCAGGGTGACAGGGGAGTGGGCTCCAGTGCTGTTATTCTAGATGATAACTTTGT
AACAAAGGCCA
CAGCCCTCACCTATGACCCCTATGTAAACTACTCCTCCCGCCATACCATAACCCAGCCCTTCTCCTACC
ACTCCCGCTAC
TTTACCCCCAAACCTGTAGTAGATTCCACTATTGATTACTTCCAACCAAACAACAAAAGAAACCAGCT
GTGGCTGAGACT
ACAAACTGCTGGAAATGTAGACCACGTAGGCCTCGGCACTGCGTTCGAAAACAGTATATACGACCAG
GGTTACAATATCC
GTGTAACCATGTATGTACAATTCAGAGAATTTAATCTTAAAGACCCCCCACTTAACCCTTAA_

Wildtype PCV2b 41513 ORF2 protein sequence

MTYPRRRYRRRRHRPRSHLGQILRRRPWLHPRHRYRWRRKNIGFNRSLRTFGYTIKRTTVRTPSWAVDM
MRFNINAF.
PPGGGSNPRSPFEYYRIRKVKVEFWPCSPITQGDRGVGSSAVILDDNFVTKATALTYDPYVNYSSRHITITQPF
SYHSRY

FTPKPVVDSTIDYFQPNNKRNQLWLRLQTAGNVDPVGLGTAFENSIYDQGYNIRVTMYVQFREFNLKDPPL
NP_