

Suppl. Figure 2. Nucleotide sequence alignment of envelope genes of KoRV-F and env-like region of defective KoRV-F (Def-KF). Identical sequences are denoted with \* below the alignment. Nucleotides that differ are highlighted in green.

KoRV-F	A	TGCTTTCATCTCAAACCCGCGCCACCTGGGGCACCCGATGAGTCC	TGGAACTGAAAAGACTGATCATCTCTTAAAGTTGCGTGTTCGGCGCGCCGAAATGAATCAACAGCATAAAAGACTGATCATCTCTT	138
Def-KF	A	TGCTTTCATCTCAAACCCGCGCCACCTGGGGCACCCGATGAGTCC	TGGAACTGAAAAGACTGATCATCTCTTAAAGTTGCGTGTTCGGCGCGCCGAAATGAATCAACAGCATAAAAGACTGATCATCTCTT	139
	*	*****		
KoRV-F	AGTTGCGTGTTCGGCGCGCCGAAATGAATCAACAGCATAACAACCTCACCAACCCATGACTCTCACCTGGCAGGTACTGTCCAGACGGGAAGTGTGTTTGGGAAAAGAAAGCAGTCGAGCCACCTGGACGTGGT	277		
Def-KF	AGTTGCGTGTTCGGCGCGCCGAAATGAATCAACAGCATAACAACCTCACCAACCCATGACTCTCACCTGGCAGGTACTGTCCAGACGGGAAGTGTGTTTGGGAAAAGAAAGCAGTCGAGCCACCTGGACGTGGT	278		
	*	*****		
KoRV-F	GGCCCTCTCTTGAGCCTGATGTGTGCGCACTGGTAGCCGGTCTCGAGTCTGGGACATCCCGAACTACTGCATCGGCCTCTCAACAGGCCAGGCCACCTCTGTTTGACCGGCCTTGGGGAATCCCGGGGCTGGCTT	416		
Def-KF	GGCCCTCTCTTGAGCCTGATGTGTGCGCACTGGTAGCCGGTCTCGAGTCTGGGACATCCCGAACTACTGCATCGGCCTCTCAACAGGCCAGGCCACCTCTGTTTGACCGGCCTTGGGGAATCCCGGGGCTGGCTT	417		
	*	*****		
KoRV-F	TGCAGCCTCCGGATGGGGGGAACCCTAGGGTGTAGCTATCCCGGGCCAGAACAAGAATTGCTATGTCCCGTTTTACGTGTGCCCGGGATGGCCGTTCCCTGTCCGAGGCCGGAGGTGCGGAGGACTCGAATCT	555		
Def-KF	TGCAGCCTCCGGATGGGGGGAACCCTAGGGTGTAGCTATCCCGGGCCAGAACAAGAATTGCTATGTCCCGTTTTACGTGTGCCCGGGATGGCCGTTCCCTGTCCGAGGCCGGAGGTGCGGAGGACTCGAATCT	556		
	*	*****		
KoRV-F	TTTACTGTAGAGGGTGGGGTGTGAGACCGGGGAACCACTTACTGGCAACCCGGTCTCGTGGGACCTTATAACTGTAGGCCGGGGCCACCTACGGGGACATGCGAACACACCGGTTGGTGAACCCACTCAAGA	694		
Def-KF	TTTACTGTAGAGGGTGGGGTGTGAGACCGGGGAACCACTTACTGGCAACCCGGTCTCGTGGGACCTTATAACTGTAGGCCGGGGCCACCTACGGGGACATGCGAACACACCGGTTGGTGAACCCACTCAAGA	695		
	*	*****		
KoRV-F	TAGAGTTCACCGAGCCTGGCAAACGGTTCGAAACTGGTACAGGGGCGAACCTGGGGTCTAAGGTTCTATGTGACTGGACACCCAGGCGTGCAGTTGACCATACGACTAGTGTATCACAAGTCCCCACCGGTAGTAGT	833		
Def-KF	TAGAGTTCACCGAGCCTGGCAAACGGTTCGAAACTGGTACAGGGGCGAACCTGGGGTCTAAGGTTCTATGTGACTGGACACCCAGGCGTGCAGTTGACCATACGACTAGTGTATCACAAGTCCCCACCGGTAGTAGT	834		
	*	*****		
KoRV-F	GGGCCCCGATCTGTCTCGCAGGACAAGGACCTCCAGAAAAATTCCCTTCCCTCCCCAGAGTGCCGGTTCCCTACCCATACACCCAGCGTCCCTATCCCCACGGTACAGGCTAGCCCCGGCCCTAGTACTCCA	837		
Def-KF	GGGCCCCGATCTGTCTCGCAGGACAAGGACCTCCAGAAAAATTCCCTTCCCTCCCCAGAGTGCCGGTTCCCTACCCATACACCCAGCGTCCCTATCCCCACGGTACAGGCTAGCCCCGGCCCTAGTACTCCA	838		
	*	*****		
KoRV-F	TCTCCACACGGGCGACCGGCTCTTTGGCCTCGTACAAGGGGCTTTCTGGCCTTGAATGCCACCAACCCGGAGGCCACGGAGTCTTGTGGTCTGTCTAGCCCTCGGCCCTCCTTATTACGAAGGAATCGCAACTC	972		
Def-KF	TCTCCACACGGGCGACCGGCTCTTTGGCCTCGTACAAGGGGCTTTCTGGCCTTGAATGCCACCAACCCGGAGGCCACGGAGTCTTGTGGTCTGTCTAGCCCTCGGCCCTCCTTATTACGAAGGAATCGCAACTC	973		
	*	*****		
KoRV-F	CAGGGCAAGTCACTTATGCCTCCACAGATTCCTAATGTCTCTGGGAGGAAAAGGGAAGCTCACCTCACTGAAGTCTCTGGACTCGGGTTATGTATAGGGAAGTACTCTTACTACCAACATCTCTGCAACCTGAC	1111		
Def-KF	CAGGGCAAGTCACTTATGCCTCCACAGATTCCTAATGTCTCTGGGAGGAAAAGGGAAGCTCACCTCACTGAAGTCTCTGGACTCGGGTTATGTATAGGGAAGTACTCTTACTACCAACATCTCTGCAACCTGAC	1112		
	*	*****		
KoRV-F	TATACCTTAAACGCCTACATACTACAAGTACCTCCCTCCCAACACAGCTGGTGGGCTGTGAATTCGGCCTCACCCCTGCCTCTTACATCAGTCTTCAACCAGTCTAACGATTTCTGTATCCAGATCCAG	1197		
Def-KF	TATACCTTAAACGCCTACATACTACAAGTACCTCCCTCCCAACACAGCTGGTGGGCTGTGAATTCGGCCTCACCCCTGCCTCTTACATCAGTCTTCAACCAGTCTAACGATTTCTGTATCCAGATCCAG	1198		
	*	*****		
KoRV-F	CTTGTCCCTCGCATCTACTATACCCAGACGGTACCTTGTCTACAGGCCATGAGTCCCCACCCTAGAAAACAAGAGAGAGCCTGTCTCACTCACCTGGCTGTCTTCTCGGATTAGGGGTCGCAGCAGGTATAGGTA	1250		
Def-KF	CTTGTCCCTCGCATCTACTATACCCAGACGGTACCTTGTCTACAGGCCATGAGTCCCCACCCTAGAAAACAAGAGAGAGCCTGTCTCACTCACCTGGCTGTCTTCTCGGATTAGGGGTCGCAGCAGGTATAGGTA	1251		
	*	*****		
KoRV-F	CCGGCTCGACCGCCCTAATAAAAGGGCCATCAAGACCTCCAACAAGGTTTGACTAGCCTCCAATTGCCATGGATACAGACCTTAGAGCCCTTCAAGACTCCGTAAGTCAACTAGAGAATTCCTTAACCTCCCTTCT	1389		
Def-KF	CCGGCTCGACCGCCCTAATAAAAGGGCCATCAAGACCTCCAACAAGGTTTGACTAGCCTCCAATTGCCATGGATACAGACCTTAGAGCCCTTCAAGACTCCGTAAGTCAACTAGAGAATTCCTTAACCTCCCTTCT	1390		
	*	*****		
KoRV-F	GAAGTAGTGTCTGAATAGGAGAGGCCCTTGTCTGCTATTTTTGAAGGAAGGGGCTTTGTGTCAGCCCTAAAAGAGGAGTGTCTGTTTCTATGTTGACCCTCAGGCCCGGTGCGAGACTCCATGAGGAACTCAAGGAA	1528		
Def-KF	GAAGTAGTGTCTGAATAGGAGAGGCCCTTGTCTGCTATTTTTGAAGGAAGGGGCTTTGTGTCAGCCCTAAAAGAGGAGTGTCTGTTTCTATGTTGACCCTCAGGCCCGGTGCGAGACTCCATGAGGAACTCAAGGAA	1529		
	*	*****		
KoRV-F	AGGCTAGATAAAGAGCAGTTAGAGCACAAAAGAATTTAAGTTGGTACGAGGGATGGTTCAACCGTTCCCCCTGGCTTACTACTTTACTGTCTGCCCTTGTGTTCCCTTGCTACTCCTCTTCTGTTACTCACCTCG	1667		
Def-KF	AGGCTAGATAAAGAGCAGTTAGAGCACAAAAGAATTTAAGTTGGTACGAGGGATGGTTCAACCGTTCCCCCTGGCTTACTACTTTACTGTCTGCCCTTGTGTTCCCTTGCTACTCCTCTTCTGTTACTCACCTCG	1668		
	*	*****		
KoRV-F	GGCCTTGTGTCTCATCAATAAGTTAGTGCAATTCGTCAATGATAGGGTTAGTGCAGTAAGAATCCTGTTCCTCAGACACAAGTACCAGACCTTAGACAACGAGGATAACCTTTAA	1780		
Def-KF	GGCCTTGTGTCTCATCAATAAGTTAGTGCAATTCGTCAATGATAGGGTTAGTGCAGTAAGAATCCTGTTCCTCAGACACAAGTACCAGACCTTAGACAACGAGGATAACCTTTAA	1780		
	*	*****		



Suppl. Figure 1. Alignment of KoRV-B with defective KoRV-B (Def-B) sequences. Def-B sequences were obtained from two overlapping PCR amplicons obtained with primer pairs P8/P3 and P2/P7. The sequences of these primers are underlined in the text. Identical nucleotides are denoted with a short bar between the nucleotide sequences. Dashes indicate gaps between sequences. Square brackets are used to indicate major sections of the KoRV-B genome including 5' LTR, gag, pro-pol, env [14]. Env sequences are also colored blue for KoRV-B, and nucleotides that differ between the regions of KoRV-B env and Def-B env-like sequences are highlighted in green.



KoRV-B	-----TCCC--ACGGCAAGGGATAATCTCTTCTGATCTCACAGTTGCACGTCTTGTGAGAGACATACCCTAC	901
Def-B	AATATACTTTTATCTTTAGATGACACCATTGAAGAACTGGTATTATGAAGAACATAAAAT-GCACT--GTTTTTATTTTATTTTCCACTGTCTTAAAGTGAAGGTGTAGGTTAAAT	1190
KoRV-B	CTTCTGACTCTTTTTCTGTCTTTTAAATATACGCTACGCCGCATATAATTTTTTTCCTTTTTATTTCAATAATAATCATTATCTGGGTGCGTAATCCACTCTTCGGGACCCCAGAA	1021
Def-B	ACAAAATACAAATTGATAGGTTGGCCACATAACAAGGAAAATGTGAATGTTTAAATTTGGCTTAAAGATTTCCATGTGCAGTGTACATTTGTGACAAGCTTCTAATTCACAGAACCCTC	1310
KoRV-B	TGGGACAGGGTGAGTCGACCCCTCTCTCTTACTAGACCCTGGAAAGACGTGAAGACAAGGGCTCACAACTTTCCGTGGAGATAAGAAAGGAAAGTGGCAAACCTTCTGTTCCCT	1141
Def-B	AGGTTTAAATCGATCTCTCTCTCTTTATCCACACTGGTTTCACTGAAACGTCGTGAGGTCAAGGGCTCACAACTTTTCAGTGGAGACGCAAAGGAAAATGGCAAACCCCTCTGTTCCCT	1430
KoRV-B	CCGAGTGGCCACGTTTGAAGTGGGATGGCCACCGAGGGGAC-TTTTAATCCTTCTATATTTCTGCA-GT-CAAAGGATTGTCTTCCAGGAGACTGGAGGACACCCGGACCAGGTTTC	1258
Def-B	CCGAGTGGCCACGTTTGAAGTGGGATGTCCACAGGAGGGAAATTTTAAATCCTTCTATATTTCTACAGTCAAAGCGGTTGTCTTCCGGAGACTGGAAGACACCCGGACTAGATTTCCCT	1550
KoRV-B	CCTACATCATAGTTTGGCAGGACCTCTCCAACAGCCCCCCCCATGGGTGCCACCCTTAGCCAAGATCGCCGTTGCCTCTGGTCAAGATAACGGGCGAAAGTCCGGCGGGGGAGGCCGT	1378
Def-B	ACACCGTGATGTGACAGGACCCCCCTTAATCAACCTCAGTGGGATCACAACTTGGCTGAAGGTAAGGAACGTCGCCTAGTCT--ACCA-----	1637
KoRV-B	CCGCTCCTTCCCGGCTCCCATCTACCCGAGACGGACAGCCTGTTCCTCCTCTCAGAACCCCGCCCTATCCAACATCCCTCCACCTCCCCAGCCCCTCACGCGCCAGACCAGCGC	1498
Def-B	-----	1637
KoRV-B	CAGGCCTAATGGCTGAGGGACTCGGCTCTGAGGGACCGCCGCTGGAAC TAGGAGTCGCCGTCGCCGAGTCTACGGGTGACACTGGTCTGACTCCACTGTGGCCCTGCCCTCCGGG	1618
Def-B	-----	1637
KoRV-B	CCGTGGGACCCCGCCGAACCAACGGCTTAGTCCCCTTGCAATATTGGCCTTTCTCCTCAGCAGATCTCTATAATTGGAAATCTAATCATCCTTCTTTTCCGAGAATCTACAGGAC	1738
Def-B	-----	1637
KoRV-B	TCACGGGACTCCTTGTAGTCCCTCATGTTTTCCACCAGCCTACTTGGGACGATTGCCAGCAGCTCCTGCAAGTCTCTTTACCACCGAGGAAAGAGAAAGGATTCTTTTGGAGGCTCGCA	1858
Def-B	-----	1637

gag

KoRV-B AGAACGTCTTGGAGTTAACGGGGCCCCACACAACCTCGAGAACCTCATTAATGAGGCCCTTCCCCCTTAATCGACCTCAATGGGATCACAAACACGGCTGAAGGTAGGGAGCGTCTCTGG 1978  
 Def-B ----- 1637

KoRV-B TCTACCGCCGACTCTAGTGGCGGGTCTCAAAGGGGCAGCAAGGCGCCACCAATTTGGCCAAGGTAAGAGAAGTCTTGCAGGGACCAACAGAACCCCGTCCGTTTTTCTAGAACGTC 2098  
 Def-B -----CCGGACTCTAGTGGCGGGTCTCAAAGGGGCAAAAAGGCGCCACCAATTTGGCCAAGGTAGGAGAGATCTTGTAGAGACCAACGGGATCCCGTCCGTTTTTCTTGAACGTC 1750

KoRV-B TAATGGAGGCTTATAGGAGATATACCCCATTTGATCCCTCTTCTGAGGGACAAAAGCGCGGTGGCCATGTCCTTTATCGGACAGTCTGCCCGGATATTA AAAAGAAATTACAAGAC 2218  
 Def-B TAACGG-----AGGAGATATACCCCAT-----AT-GATACAAAATGGCGCTGGTGGCCTTGTCCTTTATCGGACAGTC----- 1817

KoRV-B TGGAAGGACTCCAGGACCATTCCTTGCAGGATCTCATAAAGGAGGCAGAGAAGGTATATCATAAGAGAGAGACAGAGGAAGAAAAGCAAGAAAGAGAGAAAAGGAGACAGAGGAAAGAG 2338  
 Def-B ----- 1817

KoRV-B AGAGACGGCGTGACAGGCGCCAGGAGAAAACTTGACCAAAAT--CTTGGCCGCGGTAGTAAGTGAGAAAAGGGTCCAGAGGGAGACAGGCAGGGAATCTGAGCAACAGGGCAATGAGGGC 2456  
 Def-B -----CGCCCTGATATTACT-AAGAAATCACAGAGACTGGGGGACTCCAGGACCAGGGAGGCAGGTAGGGACCTGAGCAACA 1895

KoRV-B ACCTAGGGAAGGAAGACCGCCTCTGGACAAAGATCAGTGCGCATACTGTAAAGAAAGGGCCATTTGGGCAAGGGAGTGCCCGGAAGAAGAACGCCAGGGAACCAATGTCTGACCCCT 2576  
 Def-B AGGCAATGAGCACCTAAGGAAGAAAGGTCGCCTCTGCACGAAGACCAGTGTGCATATGGAAGC TGAGCAAGAGAGTGTCCCTGGAAGAAGTACGGCAGGAAAGCCAGAGTCTGACCTT 2015  
 Primer P2

gag  
 KoRV-B GGGTGACTACGGGAGTCGGGGTTCGGACCCCTCCCCGAGCCAGGGTAACTGTTAACTGTGGAGGGGATCCCCACTGAGTTTTTGGTTGATACCGGGCCGAACATTCAGTATTGACCAA 2696  
 Def-B GGGCGACTAAGGAAAGTTGCCTAGTAACAGGACACTGACGGGCATATTTTGGGTGAATTGAAGTTTACCCTACAGAAATAAAGACAGCCTGACCCTCAGCAAGAAGATGTTGAGGGAA 2135

Pro-  
 KoRV-B GCCTATGGGAAAGATGGGACCCAAACGGACAGTCTGCTGGCTGGGGCGACGGGCAGCAAAGTTTACCCTTGAGACCACCAAGAGACTTTTGGAAATTTGGACAAAAGCAAGTGACCCACTCATT 2816  
 Def-B TCTTACCTCGCTTT----- 2149

KoRV-B CTTGGTCATACCCGAATGCCTGCTCCCTGTATTAGGCAGGGACCTCCTCACCAAGCTAAAAGCTCAAATCCAGTTTTCCACAGAGGGCCACGGGTAACATGGGAAGACCGCCCGCCAT 2936  
 Def-B ----- 2149

KoRV-B GTGTTTAGTCCTGAACTTGAGAGAGGAATACCGATTACACGAAAAGCCGgTCCCTCCTTCTATCGACCCGTCATGGCTCCAACCTTTCCCATGGTTTGGGCCGAGAAGGCAGGTATGGG 3056  
 Def-B ----- 2149

KoRV-B	ACTGGCCAATCAAGTCCCACCAGTGGTAGTGGAAGTGAAGTCAGATGCCTCACCAGTGGCTGTTGACAGTACCCAATGAGCAAGGAAGCCCGGAGGGTATCAGGCCCCACATCCAAAG	3176
Def-B	-----	2149
KoRV-B	ATTCTTGGATTTGGGGATTCTGGTACCTTGCCAGTCGCCCTGGAACACCCCTTTGTTACCTGTAAAAAGCCTGGAACCAATGACTATCGGCCAGTCCAAGATTTGAGGGAGGTCAACAA	3296
Def-B	-----	2149
KoRV-B	AAGAGTACAGGACATTCATCCCACAGTCCCGAACCCCTATAACCTACTCAGTTCCCTCCCGCCAGCCACACCTGGTATTCAGTTTTAGACCTCAAAGATGCTTTCTTTTGCCTCAAGCC	3416
Def-B	-----	2149
KoRV-B	ACACCCCAACAGCCAGCCATTGTTTCGCGTTTGAATGGAGAGATCCAGAAAAAGGCAATACTGGCCAGCTAACCTGGACTCGGCTACCGCAAGGATTCAAGAACTCTCCACCCCTCTCGA	3536
Def-B	-----	2149
KoRV-B	TGAGGCCCTCCACCGGGATCTGGCATCCTTCAGGGCTCTCAACCCCAAGGTAGTGATGCTCCAATATGTTGATGACCTCCTGGTAGCGGCCCAACGTACCGAGACTGCAAAGAAGGGAC	3656
Def-B	-----	2149
KoRV-B	ACGAAGGCTCTTACAGGAACTAAGTAAGTTGGGATACCGAGTGTGCGCCAAAAAGGCCAGCTTTGCCGGGAGGAAGTTACGTATCTCGGGTATTTGCTAAAAGGGGGGAAGAGATGGCT	3776
Def-B	-----	2149
KoRV-B	GACCCAGCCCGAAGGCCACTGTAATGAAGATCCCCACCCCTACAACCCCAAGTCCGTGAGTTTTTGGGCACGCTGGATTCTGTAGGCTCTGGATCCCTGGTTTCGCTTCCCT	3896
Def-B	-----	2149
KoRV-B	GGCTGCACCCCTGTACCCCTGACGAGAGAAAAGGTTCCCTTTACCTGGACTGAGGCCACCAGGAAGCCTTTGGCCGTATAAAAGAGGCCCTGCTATCGGCCCCCGCCCTGGCCCTTCC	4016
Def-B	-----	2149
KoRV-B	GGACCTCACCAAGCATTGCTCTGTACGTGGATGAAAAAGAGGGTGTTCGCCGGGGGTGCTTACTCAAACCCTAGGACCATGGCGACGCCCGGTAGCTTACCTGTCAAAAAATTAGA	4136
Def-B	-----	2149
KoRV-B	TCCGGTGGCCAGTGGGTGGCCAACCTGCCTAAAAGCAATTGCGGCCGTAGCACTCCTTCTCAAGGACGCTGATAAGTTAACCCTAGGACAGAACGTGTTGGTGATGCACCTCACAACCT	4256
Def-B	-----	2149

KoRV-B	GGAAAAGTATTGTGAGACAGCCCCCGACCGATGGATGACAAATGCCAGGATGACCCATTACCAAAGTCTGCTGCTGAATGAGAGGGTGTCTTTTGCGCCCCCGCCATTCTGAATCCTGC	4376
Def-B	-----	2149
KoRV-B	CACCCCTGCTCCCCGTAGAGTCAGACGACACCCCAATACACATATGCTCAGAAATCCTTGCCGAGGAGACAGGAACCCGACCTGATCTGAGAGATCAGCCGTTGCCCGGGTACCCGCTTG	4496
Def-B	-----	2149
KoRV-B	GTATACGGATGGCAGCAGTTTCATCATGGATGGCAGGCGACAAGCAGGTGCTGCCATTGTGGACAACACGCGGACGGTGC GGCGAGCAACCTGCCAGAGGGAACGTCAGCTCAGAAGGC	4616
Def-B	-----	2149
KoRV-B	CGAACTAATCGCCTTGACACAAGCATTACGCTTGCCGAAGGAAAAAGCATCAACATCTACACGGACAGCAGGTACGCTTTTGCCACCGCTCATGTTACGGGGCTATATACAAACAAAG	4736
Def-B	-----	2149
KoRV-B	AGGACTGCTCACTTCCGCTGGAAAAGACATCAAGAACAAGAGGAGATTTTGGCCCTGCTAGAGGCCATCCATCTCCCTAAGCGAGTCGCTATCATCCATTGCCCCGGCCACCAAAGAGG	4856
Def-B	-----	2149
KoRV-B	GACTGACCCGTGGCTACCGGAAACCGAAAGGCCGATGAGGCCGGAACAAGCTGCCAGTCAACCAGAATACTGACGGAGACCACGAAAAATCAAGAACACTTCGAGCCTACACGGGG	4976
Def-B	-----	2149
KoRV-B	GACGATCAAGCCGAAAGAGCTCACCCCTGACCAGGGAAGGAATTCATTCAACGGCTGCATCAGCTCACGCACCTAGGGCCAGACAAGCTTCTCCAGCTTGTAGGTCGCACCAGTCTTCA	5096
Def-B	-----	2149
KoRV-B	CATCCCGAATCTCCAGTCTGTAGTGCCTGAAATCACCAGCAAGTGTGAGGTTTGTGCTGTAACCTAACGCAGTCACCACCTACCGAGAGTCTGGAAGGAGGCAAAGGGGAGATCGACCCGG	5216
Def-B	-----	2149
KoRV-B	CGTGATTGGGAAGTAGACTTCACAGAGGTTAAGCCTGGCCGGTATGGTAATAGATATTTGCTAGTGTATTATCGATACATTTTCTGGGTGGGTAGAAGCTTTCCTACAAAAACAGAGAC	5336
Def-B	-----	2149
KoRV-B	AACCCTGACCGTCTGCAAGAAGATACTTGAGGAAATCCTACCTCGTTTCGGGATCCCTAAGGTACTCGGGTCCGACAATGGCCCTGCCTTCGTTGCTCAGGTAAGCCAGGGGCTGGCCAC	5456
Def-B	-----GGGATCCCTAAGGTACTCGGGTCCGACCATGACCTACCTTCGTTGCTCAGGTAAGCCAGGGGTTGGCCAC	2220



KoRV-B	TCAACTGGGGATTAATTGGAAATTACATTTGTCATATAGACCCAGAGCTCAGGTCAGGTAGAAAAGGATGAATAGGACAATAAGAGACCTTGACAAAATTGGCCTTAGAGACCGGTGG	5576
Def-B	TCAACTGGGGATTTGATTGGAAATTACATTTGTCATATAGACCCAGAGCTCAGGTCAGGTAGAAAAGGAAGAATAGGACAATAAGAGGCCCTTGACAAAATTGGCCTTAGAGACAGGCGG	2340
KoRV-B	AAAAGACTGGGTGACCCCTCCTCCCTTGGCGCTACTTAGGGCCCGGAGTACCCCTGGCCAGTTTGGCCTGACTCCTTATGAGATTCTTCATGGGGGGCCGCCCTGTACTTGGCTCTGG	5696
Def-B	AAAAGACTGGGTGACCCCTCCTCCC-TTT-GGCG-CTGCTTAGGGCCTGGAATACCCTGACTCTTCATGAGATTCTTCAAGAAGG-----GGGGGGCCGCCCTGTACTTGTGTCTGG	2450
KoRV-B	AGAAGTCGTGGGTTCTAATGGTGATTTTTTCCCGTTCTATTTACCCACTTGAAGGCTTTAGAGGTTGTGAGGACTCAGATCTGGGACCAGATAAAAAGAAGCCTACAGGCCTGGTACTGT	5816
Def-B	GGAAGTCGTGGGTTCTAATGATGATTTTTTCCCGTTCTATTACCCACATGAAAGCTTTAGAGGTTGTGAGGACTC-----GACCAGATAAAAAGAAGCCTCCAGGCCTGGTACTGT	2562
KoRV-B	GGCCATTCCCACCCGTTCCAGGTCGGTGACCGAGTGCTGGTTAGACGTATCGGTCCGGCAGCCTTGAGCCTCGGTGGAAAGGCCATACCTGGTGCTACTGACCACCCGACCGCGGT	5936
Def-B	GACCATTCCCACCCGTTCCAGGTCGGTGACCAAGTGCTGGTTAGACGCCATCGGTCCGGCAGCCTTGAGCCTCGGTGGAAAGGCTCATACTGGTGCAA-----	2663
KoRV-B	GAAGGTTGACGGTATTGCTGCCTGGGTCCTGCTTCTCATCTCAAACCCGCGCCACCTGGGGCACCAGATGAGTCTGGGAACGGAAAGACTGATCATCTCTTAAGTTGGTGTTCG	6056
Def-B	-----CCTGCTTCTCATCTCAAACCCGCGCCACCTGGGGCACCAGATGAGTCTGGGAACGGAAAGACTGATCATCTCTTAAGTTGGTGTTCG	2753
KoRV-B	CGGCGCCGAAATGATCAACAGCATAAACCCTCACCAACCCATGACTCTCACCTGGCAGGTAAGTGTCCAGACGGGAAGCTCGTTTGGGAAAAGAAAGCAGTCGAGCCACCTGGA	6176
Def-B	CGGCGCCGAAATGATCAACAGCATAAACCCTCACCAACCCATGACTCTCACCTGGCAGGTAAGTGTCCAGACGGGAAGCTCGTTTGGGAAAAGAAAGCAGTCGAGCCACCTGGA	2870
KoRV-B	CGTGGTGGCCCTCCTTGAGCCTGATGTGTGTGCGCTGGCGGCGGGTCTTGAGACCTGGGGCATCCCGCACCTCACCGGCCAGAATCTCAACAGTCTGCGCCCCCGATGGCTGTGGGG	6296
Def-B	CGTGGTGGCCCTCCTTGAGCCTGATGTGTGTGCGCTGGCGGCGGGTCTTGAGACCTGGGGCATCCCGCACCTCACCGGCCAGAATCTCAACAGTCTGCGCCCCCGATGGCTGTGGGG	2990
KoRV-B	TGCTTTATAGTCAGGTCGGCAGGGGTTGGTCAGGCAATCGAGCTATGGAACCTTGGGGTGTGCTGTCCCCGAGACCGGAACAGACTGGCTCAATCTCAGTTCTATGTGTGTCCCCGG	6416
Def-B	TGCTTTATAGTCAGGTCGGCAGGGGTTGGTCAGGCAATCGAGCTATGGAACCTTGGGGTGTGCTGTCCCCGAGACCGGAACAGACTGGCTCAATCTCAGTTCTATGTGTGTCCCCGG	3110
	Primer P3 complementary	
KoRV-B	ATGGCCGTTCCCTGTCCGAGGCCTGGAGGTGCGGAGGGTTTGTAGTCTTTGTAATGTAAAGAGTGGGGTTGTGAGACCACGGGAACCGCCTACTGGCAACCCCGTCTCGTGGGACCTTA	6536
Def-B	ATGGCCGTTCCCTGTCCGAGGCCTGGAGGTGCGGAGGGTTTGTAGTCTTTGTAATGTAAAGAGTGGGGTTGTGAGACCACGGGAACCGCCTACTGGCAACCCCGTCTCGTGGGACCTTA	3230
KoRV-B	TAACTGTAGGCCGGGCCACCCCTACGGGGACATGCGAACACACCGGTTGGTGCAACCCACTCAAGATAGAGTTACCGAGCCTGGCAAACGGTCCGAAACTGGCTACAGGGGCGAACCT	6656
Def-B	TAACTGTAGGCCGGGCCACCCCTACGGGGACATGCGAACACACCGGTTGGTGCAACCCACTCAAGATAGAGTTACCGAGCCTGGCAAACGGTCCGAAACTGGCTACAGGGGCGAACCT	3350

KoRV-B	GGGGTCTAAGGTTCTATGTGACTGGACACCCAGGCGTGCAGTTGACCATACGACTAGTGTATCACAAGTCCCCACCGGTAGTAGTGGGCCCGATCCTGTCTCGCAGACAAGGACCTC	6776
Def-B	GGGGTCTAAGGTTCTATGTGACTGGACACCCAGGCGTGCAGTTGACCATACGACTAGTGTATCACAAGTCCCCACCGGTAGTAGTGGGCCCGATCCTGTCTCGCAGACAAGGACCTC	3470
KoRV-B	CCAGAAAAATTCCTTCCTCCCCAGAGTGCCGGTTCTACCCATACACCCACAGCGTCCCTATCCCCACGGTACAGGCTAGCCCCCGGCCCTAGTACTCCATCTCCCACCACGGGGC	6896
Def-B	CCAGAAAAATTCCTTCCTCCCCAGAGTGCCGGTTCTACCCATACACCCACAGCGTCCCTATCCCCACGGTACAGGCTAGCCCCCGGCCCTAGTACTCCATCTCCCACCACGGGGC	3590
KoRV-B	ACCGGCTCTTGGCCTCGTACAAGGGGCTTTCTGGCCTTGAATGCCACCAACCCGAGGCCACGGAGTCTTGCTGGCTCTGTCTAGCCCTCGGCCCTCCTTATTACGAAGGAATCGCAA	7016
Def-B	ACCGGCTCTTGGCCTCGTACAAGGGGCTTTCTGGCCTTGAATGCCACCAACCCGAGGCCACGGAGTCTTGCTGGCTCTGTCTAGCCCTCGGCCCTCCTTATTACGAAGGAATCGCAA	3710
KoRV-B	CTCCAGGGCAAGTCACTTATGCCTCCACAGATTCCCAATGTCGCTGGGGAGGAAAAGGGAAGCTCACCTCACTGAAGTCTCTGGACTCGGGTTATGTATAGGAAAAGTACCTCCTACTC	7136
Def-B	CTCCAGGGCAAGTCACTTATGCCTCCACAGATTCCCAATGTCGCTGGGGAGGAAAAGGGAAGCTCACCTCACTGAAGTCTCTGGACTCGGGTTATGTATAGGAAAAGTACCTCCTACTC	3830
KoRV-B	ACCAACATCTCTGCAACCTGACTATAACCTTAAACGCCTCACATACTCACAAGTACCTCCTCCCTCCAACCACAGCTGGTGGGCTTGTAAATCTGGCCTCACCCCTGCCTCTCTACAT	7256
Def-B	ACCAACATCTCTGCAACCTGACTATAACCTTAAACGCCTCACATACTCACAAGTACCTCCTCCCTCCAACCACAGCTGGTGGGCTTGTAAATCTGGCCTCACCCCTGCCTCTCTACAT	3950
KoRV-B	CAGTCTTCAACCAGTCTAACGATTCTGTATCCAGATCCAGCTTGTCCCTCGCATCTACTATCACCCAGACGGTACCTTGCTACAGGCCATAGTACCCCCACCTAGAAAACAGAGAG	7376
Def-B	CAGTCTTCAACCAGTCTAACGATTCTGTATCCAGATCCAGCTTGTCCCTCGCATCTACTATCACCCAGACGGTACCTTGCTACAGGCCATAGTACCCCCACCTAGAAAACAGAGAG	4070
KoRV-B	AGCCTGTCTCACTCACCTGGCTGTCTTCTCGGATTAGGGGTCGAGCAGGTATAGGTACCGGCTCGACCGCCCTAATAAAAGGGCCCATGACCTCAACAAGGTTTGACTAGCCTCC	7496
Def-B	AGCCTGTCTCACTCACCTGGCTGTCTTCTCGGATTAGGGGTCGAGCAGGTATAGGTACCGGCTCGACCGCCCTAATAAAAGGGCCCATGACCTCAACAAGGTTTGACTAGCCTCC	4190
KoRV-B	AAATTGCCATGGATACAGACTTAGAGCCCTTCAAGACTCCGTAAGTAACTAGAGAATTCCTTAACCTCCCTTCTGAAGTAGTGCTCCAGAATAGGAGAGGCCTTGATCTGCTATTTT	7616
Def-B	AAATTGCCATGGATACAGACTTAGAGCCCTTCAAGACTCCGTAAGTAACTAGAGAATTCCTTAACCTCCCTTCTGAAGTAGTGCTCCAGAATAGGAGAGGCCTTGATCTGCTATTTT	4310
KoRV-B	TGAAGGAAGGGGCTTTTGTGCAGCCCTAAAGGAGTGTCTTCTATGTTGACCACCTCAGGCCTGGTGCAGACTCCATGAGGAACACTCAAGGAAAGGTTAGATAAGAGGCAGTTAG	7736
Def-B	TGAAGGAAGGGGCTTTTGTGCAGCCCTAAAGGAGTGTCTTCTATGTTGACCACCTCAGGCCTGGTGCAGACTCCATGAGGAACACTCAAGGAAAGGTTAGATAAGAGGCAGTTAG	4430
KoRV-B	AGCACAAAAGAATTAAGTTGGTACGAGGGATGGTTCAACCGTCCCTTGGCTTACTACTTTACTGTCTGCCCTTGCTGGTCCCTGCTACTCCTCCTCTG-TTCTCACCTCGGG	7855
Def-B	AGCACAAAAGAATTAAGTTGGTACGAGGGATGGTTCAACCGTCCCTTGGCTTACTACTTTACTGTCTGCCCTTGCTGGTCCCTGCTACTCCTCCTCTGATTCTCACCTCGGG	4549

KoRV-B	CCTTGTGTCATCAATAAGTTAGTGCAATTC	TCAATGATAGGGTTAGTGCAGTAAG	ATTCTG	TCTCAG	CACAAGTACCAGACCC	TAGACAACGAGGATAACCTTTAA	TTCTGCTCT	7975
Def-B	CCTTGTGTCATCAATAAGTTAGTGCAATTC	TCAATGATAGGGTTAGTGCAGTAAG	ATCCTG	TCTCAG	CACAAGTACCAGACCC	TAGACAACGAGGATAACCTTTAA	TTCTGCTCT	4669
KoRV-B	ATGATTAGAGCTACCTCAAAGAAAATGGGGAA	TGAAGGAGGCAGAAATCATGAGGCAGAAAT	CATTCCGTGAAGTATGGAAACT	ACCCGAGGGCCCCAGGGTTAGGGACAAGCGCAG				8095
Def-B	ATGATTAGAGCTACCTCAAAGAAAATGGGGAA	TGAAGGAGGCAGAAATCATGAGGCAGAAAT	CATTCCGTGAAGTATGGAAACT	ACCCGAGGGCCCCAGGGTTAGGGACAAGCGCAG				4789
KoRV-B	CCAGGCACAGTAAAAGGTCAGAGCAAGAAAA	CAAGGAAGGTTTGGAGTGCCAAACGGAATAT	CTGTGGTCAACGGAATATCTGTGG...					8215
Def-B	CCAGGCACAGTAAAAGGTCAGAGCAAGAAAA	CAAGGAAGGTTTGGAGTGCCAAACGGAATAT	CTGTGGTCAACGGAATATCTGTGG					4876
			Primer P7 complementary					

## Supplemental table 1. Host range of KoRV variants.

	KoRV-A	KoRV-B	KoRV-C	KoRV-D
MDTF-THTR1	-*	+**	-	-
MDTF-PiT1	+	-	-	-
XC	+	-	-	-
BAT	+	+	+	-
HOS	+	+	+	-
HT1080	+	+	+	-
HT1080-KAZAP	-	+	+	-
HT1080-KBZAP	+	-	+	-

- Denotes a normalized value of < 0.01
- + denotes a normalized value of 1