

Table S2. Oligonucleotides used in this study.

Primer	5'-Sequence-3'	Purpose
pX-F	ATTTCGTGGCTGCACCGAACAGAAGCTGATCTCCGAAGAAGACCTGATGATGAGCAGAATTG	Replacing HIV p6 ^{Gag} sequence with full-length, N-terminus (Pentamer domain), C-terminus (Δ PAD), secretion region (SecD) of HAV pX, or YPX _{3L} tandem late domains containing VP2 fragment
pX Δ PAD-F	ATTTCGTGGCTGCACCGAACAGAAGCTGATCTCCGAAGAAGACCTGATGATGAGCAGAATTG	
pX Δ 123-R	GGCAGAGGGGAAAAAGATCTGCTAGCAAGCTTCTCGAGTCAACTCTCAAATCTTTTATCT	
pX/ Δ 1/ Δ 2/ Δ 3-R2	GGCAGAGGGGAAAAAGATCTGCTAGCAAGCTTCTCGAGTCATTGTGAAACAGTCC	
SecD-F	ATTTCGTGGCTGCACCGAACAGAAGCTGATCTCCGAAGAAGACCTGAGGAAGCCATAT	
SecD-R	GGCAGAGGGGAAAAAGATCTGCTAGCAAGCTTCTCGAGTCATGACAAATCTTCC	
VP2LD-F	ATTTCGTGGCTGCACCGAACAGAAGCTGATCTCCGAAGAAGACCTGCTGGTGACCAGAGCTAT	
VP2LD-R	GGCAGAGGGGAAAAAGATCTGCTAGCAAGCTTCTCGAGTCATCCTGTCCCAATATTTAATTCTGACC	
EPN01-Seq	GAATGGTTCAAAGCGGGC	
Δ HIVM2-5 F	TATATGGTACCATGGGTTCTAAATCTGGCTCCGGC	
Δ HIVM2-link F	TATATGGTACCATGAAGATCGAAGAGCTGTTCAAGA	
Δ HIVM2-5 R	TGGATGGTACCTCCGGATCGATAAATCTAG	
pX Δ 1a-F	TGAGGGATCCGAAGTTGGGAAACAAAGACTCAAGTATGC	
pX Δ 1a-R	TGAGGGATCCACTCTCAAATCTTTTATCTTCCCTCTGATCTAGG	
pX Δ 2a-F	TGAGGGATCCGAAGAATTGTCAAATGAAGTACTTCCACC	
pX Δ 2a-R	TGAGGGATCCTAATCTCAGTTCTTTATATGGCTTCCCTGC	
EPN01-seq2	AAATGGGCGGTAGGCGTGTA	
VP4/7-11 F	GAATTATCGATCCGGAGGTACCATGGGTATTTTCCAGACTGGTTCTAAATCTGGCTCCGGCTCTG	Cloning sequences with different length of HAV VP4 to EPN-pX
VP4/7-11 R	CAGAGCCGGAGCCAGATTTAGAACCAGTCTGGAAAATACCCATGGTACCTCCGGATCGATAATTC	
VP4/3-11 F	GAATTATCGATCCGGAGGTACCATGTCTAGACAAGGTATTTTCCAGACTGGTTCTA	
VP4/3-11 R	TAGAACCAGTCTGGAAAATACCTTGTCTAGACATGGTACCTCCGGATCGATAATTC	
VP4/1-11 F	GAATTATCGATCCGGAGGTACCATGAACATGTCTAGACAAGGTATTTTCCAGACTGGTTCTA	
VP4/1-11 R	TAGAACCAGTCTGGAAAATACCTTGTCTAGACATGTTTCATGGTACCCTCCGGATCGATAATTC	
YxxL/A-F	GAGAGTCATATAGAATGCAGGAAGCCAGCTGCAGCAGCGAGATTAGAAGTTGGGAAACAAAGACTC	Constructing Ala substitutions at the YxxL motif in EPN-pX
YxxL/A-R	GAGTCTTTGTTTCCCAACTTCTAATCTCGCTGCTGCAGCTGGCTTCTGCATTCTATATGACTCTC	
KQ1/A-F	GCCATATAAAGAAGTCTGAGATTAGAAGTTGCGGCAGCAAGACTCAAGTATGCTCAGGAAGAATTG	Constructing Ala substitutions at the KFERQ-like motifs in EPN-pX
KQ1/A-R	CAATTCTTCTGAGCATACTTGAGTCTTGCTGCCGCAACTTCTAATCTCAGTTCTTTATATGGC	
KQ2/A-F	GATTAGAAGTTGGGAAACAAAGACTCAAGGCTGCTGCCGAAGAATTGTCAAATGAAGTACTTCCACC	

KQ2/A-R	GGTGGGAAGTACTTCATTTGACAATTCTTCCGCAGCAGCCTTGAGTC TTTGTTCCTCCAACTTCTAATC	
KQ1,2/A-F	GAAGTTGCGGCAGCAAGACTCAAGGCTGCTGCGGAAGAATTGTCAA ATGAAGTACTTCCACC	
KQ1,2/A-R	GGTGGGAAGTACTTCATTTGACAATTCTTCCGCAGCAGCCTTGAGTC TTGCTGCCGCAACTTC	
ALIX1-F	CCCACCATGTACCCATACGATGTTCCAGATTACGCTatggcgacat tcatctcggg	Inserting coding sequence of ALIX into pCMV-HA
ALIX65-F	CCCACCATGTACCCATACGATGTTCCAGATTACGCTctcgagacgc tcctgag	
ALIX135-F	CCCACCATGTACCCATACGATGTTCCAGATTACGCTgcagcagaac agaacctgg	
ALIX210-F	CCCACCATGTACCCATACGATGTTCCAGATTACGCTgatgccatca tagctaaattggc	
ALIX361-F	CCCACCATGTACCCATACGATGTTCCAGATTACGCTGTGTCAGTAC AGCAGTCTTTGG	
ALIX360-R*	TCGACCGAATTCGGGCCTCCATGGCCATAAGTCAGGGAACCATCTT CTCAAACAGATC	
ALIX702-R*	TCGACCGAATTCGGGCCTCCATGGCCATAAGTCATCTTTCTGTCTT CCGTGCAA	
ALIX868-R*	TCGACCGAATTCGGGCCTCCATGGCCATAAGTCACTGCTGTGGATA GTAAGACTGC	
p16-SacI	CCCACCATGTACCCATACGATGTTCCAGATTACGCTGAGCTCCATT GAACTCAA	
p16-EcoRI	TCGACCGAATTCGGGCCTCCATGGCCATAAGCTCCATGAATTCAGT CATGT	
p16/VP1-seqf	CACTGGATGGTTTGGGAGAC	
p16/3B-seqr	TTACACCATGATATACCCCTTCA	

*Red letters = stop codon