

**Table S1.** Primers sequences

Primer	Sources	Sequence (5' to 3')
B-CA-F3	[1]	ATTATCAGAAGGAGCCACC
B-CA-B3	[1]	CATCCTATTTGTTCTGAAGG
B-CA-FIP	[1]	CAGCTTCCTCATTGATGGTTTCTTTTTAACACCATGCTAAACACAGT
B-CA-BIP	[1]	TGTTGCACCAGGCCAGATAATTTGTACTGGTAGTTCCTGCTATG
B-CA-LF	[1]	TTAACATTTGCATGGCTGCTTGAT
B-CA-LB	[1]	GAGATCCAAGGGGAAGTGA
ACeCA-F3	This work	CCCTTTAGAGACTATGTAGACC
ACeCA-B3	This work	TCCTACTCCCTGACATGC
ACeCA-FIP	This work	CAACAAGGTTTCTGTCATCCAATTTGGTTCTATAAACTCTAAGAGCC
ACeCA-BIP	This work	GTCCAAAATGCGAACCCAGATGTCATCATTCTTCTAGTGTAG
ACeCA-LF	This work	TACCTCCTGTGAAGCTTGCTC
ACeCA-LB	This work	TTTAAAAGCATTGGGACCAGCGG
B-PR-F3	[1]	AAAGATAGGGGGGCAACT
B-PR-B3	[1]	GTTGACAGGTGTAGGTCCTA
B-PR-FIP	[1]	GGTTTCCATCTTCTGGCAAATTTTTCTCTATTAGATACAGGAGCAGA
B-PR-BIP	[1]	TGATAGGGGAATTGGAGGTTTTTCTATAGCTTTATGTCCACAGA
B-PR-LF	[1]	TTCCTATAGCTTTATGTCCACAGA
B-PR-LB	[1]	TATCAAAGTAAGACAGTA
A-PR-F3	This work	AARARTAGGRGGACAGCT
C-PR-F3	This work	AAAAGTAGGGGGCCAGRT
F-PR-F3	This work	AAAAGTAGGGGGACAGCT
AC-PR-F3b	This work	CACTCTTTGGCAACGACC
AC-PR-B3	This work	ATGTTGACAGGTGTAGGYCC
AC-PR-FIP	This work	GGTTTCCATCTTCTGGCAAATTTTTCTCTATTAGAYACAGGAGCAGA
AC-PR-BIPa	This work	TGATAGGRGGAATTGGAGGTTTTTCTATAGCYTTWTKCCACARA
AC-PR-BIPb	This work	TGATAGGRGGAATTGGAGGTTTTTGCYTTWTKCCACARATTTCTA
AC-PR-LF	This work	TATDTCTTCTAATACTGTATCA
AC-PR-LB	This work	ATCAAAGTAAGACARTAT
B-RT-F3	[2]	AGTTCCTTAGATAAAGACTT
B-RT-B3	[2]	CCTACATACAAATCATCCATGT
B-RT-FIP	[2]	GTGGAAGCACATTGTAATCTTTTTGGAAGTATACTGCATTTACCAT
B-RT-BIP	[2]	GGAAAGGATCACCAGCAATATCCTCTGGATTTTGTCTAAAAGGC
B-RT-LF	[2]	GGTGTCTCATTGTTTATACTA
B-RT-LB	[2]	GCATGACAAAAATCTTAGA
ACeIN-F3	This work	TATTTGGAAAGGACCAGC
ACeIN-F3_b	This work	CGGGTTTATTACAGRGACAGCA
ACeIN-F3_c	This work	CCTATTTGGAAAGGACCAGC
ACeIN-F3_cL	This work	CCTATTTGGAAAGG+ACCAGC
ACeIN-B3a	This work	TCTTTGAAAYATACATATGRTG
ACeIN-B3a_L	This work	TCTTT+GAAAYATACATATGRTG
ACeIN-B3b	This work	AACATACATATGRTGYTTTACTA
ACeIN-B3bL	This work	AACA+TACATAT+GRTGYTTTACTA
ACeIN-FIPa	This work	CTTGGTACTACCTTTATGTCATAAAGCTCCTCTGGAAAGGTG
ACeIN-FIPa_T	This work	CTTGGTACTACCTTTATGTCATAAAGCTCCTCTGGAAAGGTG
ACeIN-FIPb	This work	CTTGGCACTACTTTTATGTCATAAAGCTCCTCTGGAAAGGTG
ACeIN-FIPb_T	This work	CTTGGCACTACTTTTATGTCATAAAGCTCCTCTGGAAAGGTG
ACeIN-FIPe	This work	CTTGGTACTACYTTTATGTCATAAARCTACTCTGGAAAGGTG
ACeIN-FIPe_T	This work	CTTGGTACTACYTTTATGTCATAAARCTACTCTGGAAAGGTG
ACeIN-FIPe_L	This work	CTTGGTACTACYTTTATGTCATAAARCTACTCTGGAAAGGTG
ACeIN-FIPf	This work	CTTGGCACTACYTTTATGTCATAAARCTCTCTGGAAAGGTG
ACeIN-FIPf_T	This work	CTTGGCACTACYTTTATGTCATAAARCTCTCTGGAAAGGTG

ACeIN-FIPf_L	This work	CTTGGCACTACYTTTTATGTCACTAAARCTYCTCT+GGAAAGGTG
ACeIN-FIPg	This work	CTYCTTGGTACTACCTTTATGTCATACTCTGGAAAGGTGAAGG
ACeIN-FIPg_T	This work	CTYCTTGGTACTACCTTTATGTCATTTTTACTCTGGAAAGGTG
ACeIN-FIPh	This work	CTTCTTGGCACTACTTTTTATGTCATYCTCTGGAAAGGTGAAGG
ACeIN-FIPh_T	This work	CTTCTTGGCACTACTTTTTATGTCATTTTTYCTCTGGAAAGGTG
ACeIN-FIPi	This work	GGYACTACYTTTTATGTCACTATTRTCCCTATTTGGAAAGGACCAGC
ACeIN-FIPi_T	This work	GGYACTACYTTTTATGTCACTATTRTCTTTTCCTATTTGGAAAGGACCAGC
ACeIN-FIPj	This work	CTTGGTACTACCTTTATGTCACTAAAACACTCTGGAAAGGTG
ACeIN-FIPj_T	This work	CTTGGTACTACCTTTATGTCACTATTTTAAACTACTCTGGAAAGGTG
ACeIN-FIPk	This work	CTTGGCACTACTTTTTATGTCACTAAAGCTYCTCTGGAAAGGTG
ACeIN-FIPk_T	This work	CTTGGCACTACTTTTTATGTCACTATTTTAAAGCTYCTCTGGAAAGGTG
ACeIN-BIP	This work	GGAYTATGGAAAACAGATGGCAGCCATGTTCTAATCYTCATCCTG
ACeIN-BIP_T	This work	GGAYTATGGAAAACAGATGGCAGTTTTCCATGTTCTAATCYTCATCCTG
ACeIN-BIP_LT	This work	GGAYTATGGAAAA+CAGATGGCAGTTTTCCATGTTCTAA+TCYTCATCCTG
ACeIN-LF	This work	TCTTGTATTACTACTGCCCTT
ACeIN-LF_b	This work	CTATTGTCTTGTATTACTACTGC
ACeIN-LF_c	This work	CTACTGCCCTTACCTTTCCA
ACeIN-LB	This work	GTGATGATTGTGTGGCARGTAG
F-IN-F3	This work	AGTTTGGAAAGGACCAGC
F-IN-B3a	This work	TCTTTGAAACATGCATATGGTA
F-IN-B3b	This work	AACATACATATGGTATTTTACTA
F-IN-FIP	This work	CTTGGTACTACCTTTATTTCACTAAAGCTACTCTGGAAAGGTG
F-IN-BIP	This work	GGATTATGGAAAACAGATGGCAGCCATGTGTTAATCCTCATCCTG
F-IN-LF	This work	CTTGTATGACTACTGCCCTT
F-IN-LB	This work	GTGATGATTGTGTGGCAGGTAG

Note: "+" in sequences indicates that the following base is an LNA base.

#### References:

1. Curtis KA, Rudolph DL, Owen SM, Rapid detection of HIV-1 by reverse-transcription, loop-mediated isothermal amplification (RT-LAMP), J Virol Methods. 2008, 151(2): 264-70.
2. Curtis KA, Rudolph DL, Nejad I, Singleton J, Beddoe A, Weigl B, LaBarre P, Owen SM, Isothermal amplification using a chemical heating device for point-of-care detection of HIV-1. PLoS One. 2012;7(2):e31432.