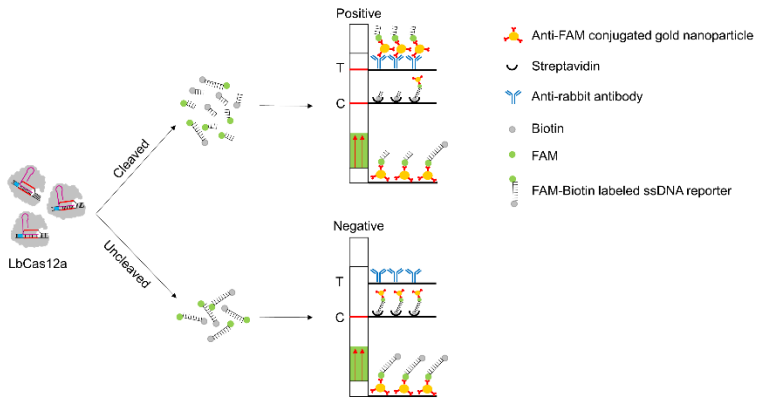
Supplementary Materials

a



b

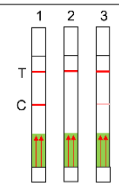
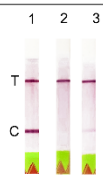
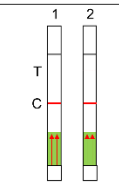
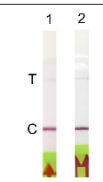
Interpretation	Schematic	Illustration	Descriptions
Positive			Positive result can be interpreted in three different ways: (1) Two bands on both Control line and Test line (2) A single Test band as complete cleavage by Cas12 (3) Test band with weak band in Control line as Cas12 cleavage activity is increased
Negative			Negative result can be interpreted in two different ways: (1) A single band on the Control line (2) A single band on the Control line with weak Test band which is much fainter than true positive and can be often seen beyond the readout time

Figure S1. Interpretation of results for CRISPR-Cas12 assay with lateral flow-based readout. (a) Illustration of the principle of lateral flow assay. After recognition of the target sequence by Cas12, the ssDNA reporters labeling with carboxyfluorescein (FAM) and biotin were cleaved. Then, the cleaved-FAM binds to anti-FAM conjugated with a gold nanoparticle on the sample pad. After flow-ing through the strip, the cleaved-biotin is captured by streptavidin on the Control line and anti-FAM is captured by anti-rabbit antibody present on the Test line. This can be interpreted as a posi-tive result. In a negative result, there is no cleavage of the reporter by Cas12. Therefore, biotin on an intact reporter is captured by streptavidin on the Control line; (b) Result interpretation of the RT-LAMP-coupled CRISPR-Cas12 assay combining with a lateral flow-based readout. T, Test line; C, Control line.

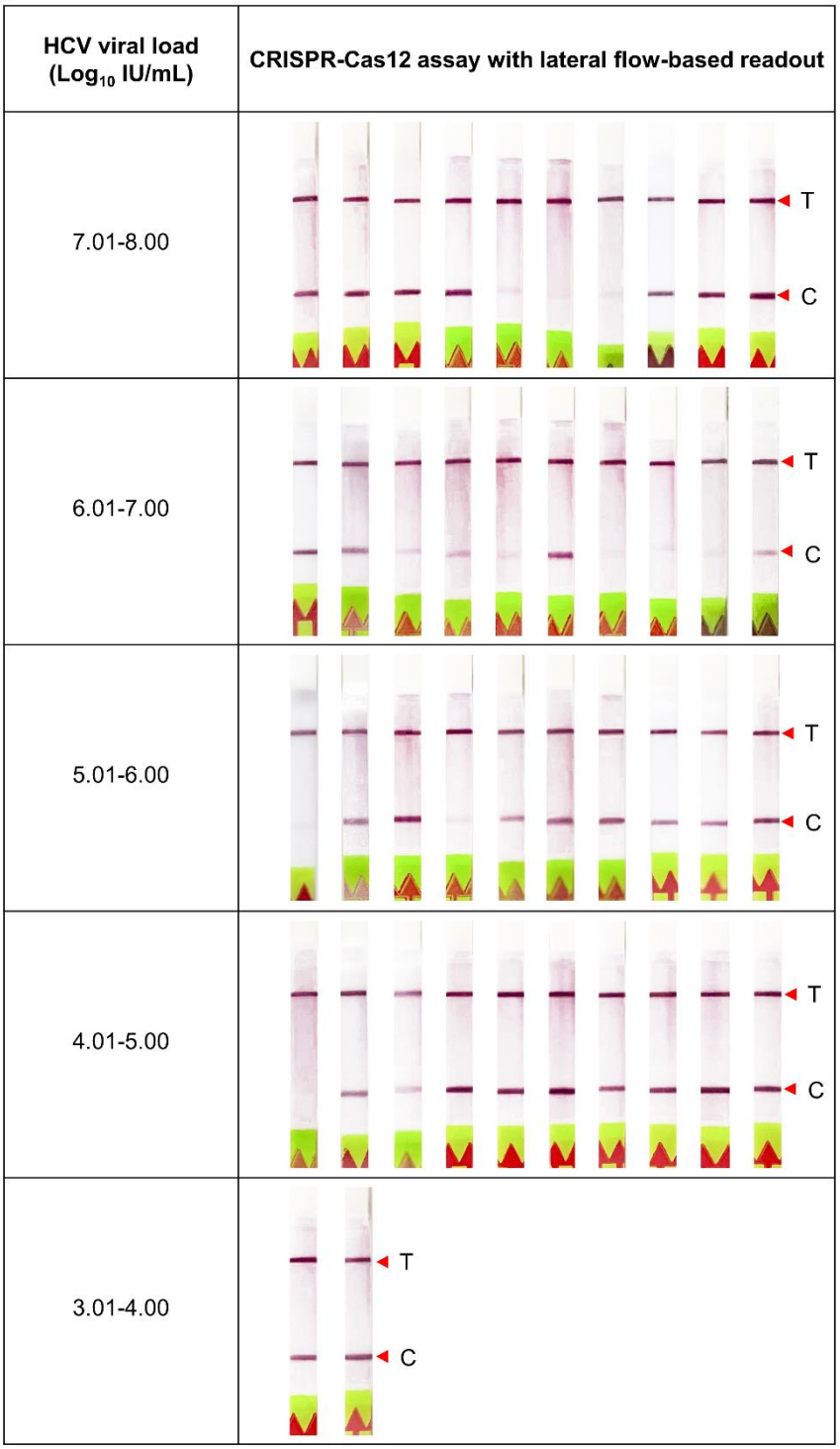


Figure S2. Evaluation of CRISPR-Cas12 assay with lateral flow-based readout according to HCV viral loads. T, Test line; C, Control line.