Electronic Supplementary Information (ESI)

Design of Gaussia luciferase-based bioluminescent stem-loop probe for sensitive detection of HIV-1 nucleic acids

Hamdi Joda[1], Angeliki Moutsiopoulou[1,2], Geoffrey Stone[3], Sylvia Daunert[1], Sapna Deo[1*]

[1] Department of Biochemistry and Molecular Biology

Miller School of Medicine, University of Miami

[2] Department of Chemistry, University of Miami

[3] Department of Microbiology and Immunology

Miller School of Medicine, University of Miami

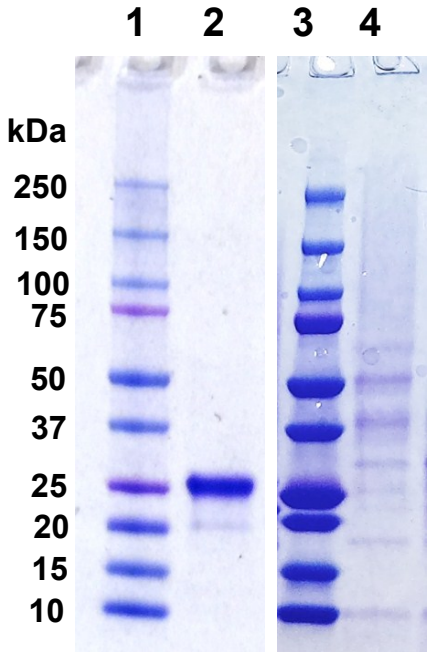

Figure S1. SDS-PAGE showing analysis of the purified G-SLP visualized by coomassie blue staining. Lane 1; protein ladder, Lane 2; unconjugated GLuc, Lane 3; protein ladder, Lane4; GLuc conjugated with SLP.

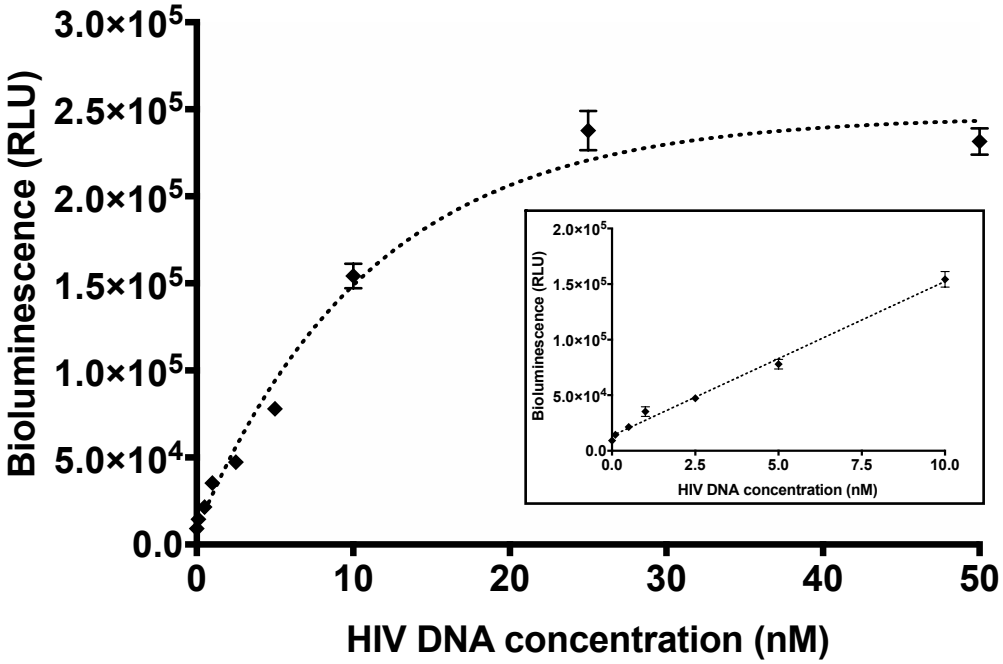

Figure S2. Calibration curve obtained using G-SLP in the presence of various concentrations of HIV-1 DNA target. Assay was carried out at 37 ºC for 15 min. Each data point represents the average and standard deviation of three individual measurements. Some error bars that are not visible are obstructed by the symbols of the points.

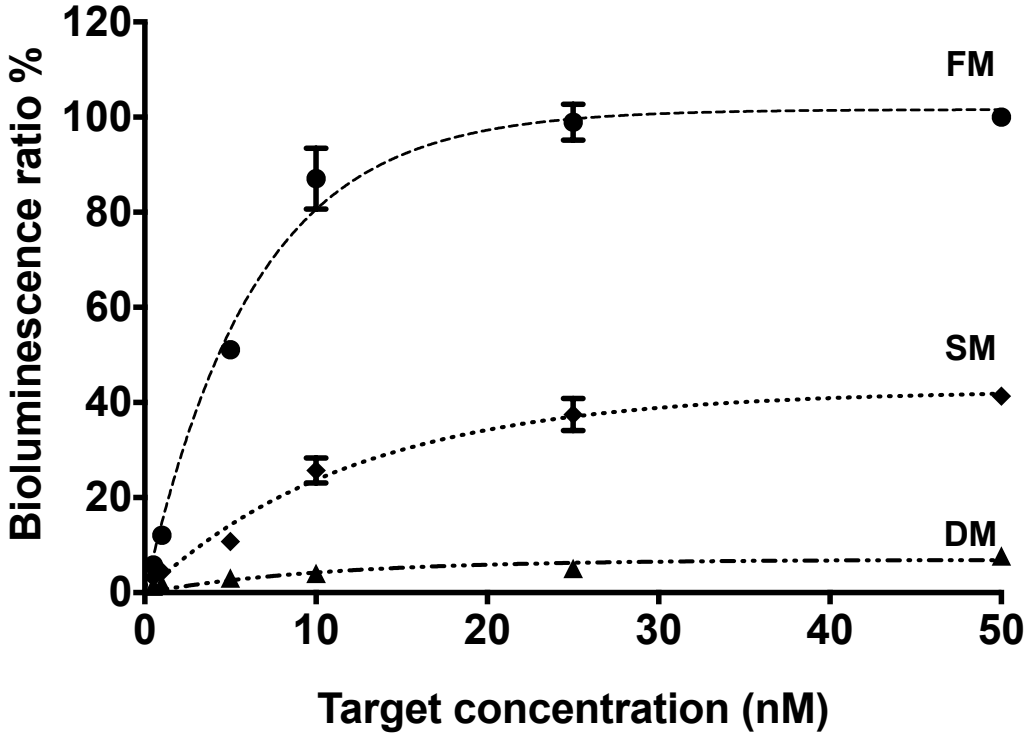

Figure S3. Assay specificity evaluation at 45 ºC, showing the bioluminescence signals for fully matched (-□-), single mismatched (ᔓ□ᔓ) and double mismatched (–▲ᔓ) DNA targets. Assay was performed for 60 min in the presence of 0.5, 1, 5, 10, 25 and 50 nM targets concentration. Each data point represents the average and standard deviation of three individual measurements