CREATIVE BIOMART®
Assay Kit

HIV-1 Protease Assay Kit

Product Information

Cat

Kit-1060

Cat.No. Kit-1060

Product Overview

HIV-1 Protease Assay Kit uses an optimized FRET peptide substrate for a continuous measurement of HIV protease activities, which can be used for high through-put screening of HIV-1 protease inhibitors.

Description

Human immunodeficiency virus type 1 (HIV-1) precursor polyprotein is generated during virion maturation process. HIV-1 protease (HIV-1 PR) is responsible for cleaving up to 12 sites in the Gag and Gag-Pol precursor polypeptides. The order and kinetics of cleavage as well as the extent of precursor processing appear to be critical steps in the generation of fully infectious, appropriately assembled viral particles. Therefore, inhibition of HIV-1 protease represents an important avenue for antiviral therapy.

Fluorescence resonance energy transfer (FRET) assays have become a popular and effective means for drug screening. HIV-1 Protease FRET Assay Kit provides a convenient method for high throughput screening of HIV-1 protease inhibitors and continuous quantification of HIV-1 protease activity using a fluorescence resonance energy transfer (FRET) peptide. The sequence of this FRET peptide is derived from the native p17/p24 cleavage site on Prgag for HIV-1 protease. In the FRET peptide, the green fluorescence is quenched by appropriate fluorescence quencher until this peptide is cleaved into two separate fragments by HIV-1 protease at the cleavage site. Upon cleavage, the green fluorescence is recovered and can be monitored at excitation/emission = 490 nm/530 nm. The assays can be performed in a black 96-well or 384-well plate format.

Size

100 assay/200 assay/400 assay/800 assay

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Kit Components

- HIV-1 protease (22ul or 42ul)
- FRET HIV-1 substrate 100uM (120 or 220ul)
- 2X assay buffer (33ml)
- 1 M DTT (100 uL)
- Fluorescent reference standard (10uM, 20ul)
- Control inhibitor (Pepstatin A, 20uM, 100ul)
- Stop solution (10 ml)
- Deionized water (50 ml)
- Black 96-well plate (1 or 2)
- User Manual

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