

Anti-HIV-1 Protease Antibody, rabbit serum

Catalog #65-018 100 µl

HIV-1 protease is the aspartyl protease that mediates proteolytic cleavages of Gag and Gag-Pol polyproteins during or shortly after the release of the virion from the plasma membrane. Cleavages take place as an ordered, step-wise cascade to yield mature proteins. This process is called maturation. HIV-1 protease displays maximal activity during the budding process just prior to particle release from the cell. It cleaves Nef and Vif, probably concomitantly with viral structural proteins on maturation of virus particles. Additionally, it hydrolyzes host EIF4GI and PABP1 in order to shut off the capped cellular mRNA translation. The resulting inhibition of cellular protein synthesis serves to ensure maximal viral gene expression and to evade host immune response.

Applications

Western blot 1/2,000 dilution

Dot blot 1/2,000 dilution

Immunoprecipitation 1/2,000 dilution

Inhibition of HIV-1 Protease activity (assay dependent)

ELISA 1/10,000 dilution

Not tested in other applications

Specification

Immunogen: Full-size functional recombinant HIV-1 protease expressed and purified from E. coli

Reactivity: Reacts with HIV-1 protease of all substrains

Form: Whole antiserum with 0.09% sodium azide

Storage: Shipped at 4°C and store at -20°C. When necessary, freezing (with liquid or ethanol in dry-ice) and thawing (in water at room temperature with shaking) should be done rapidly.

Data Link

UniProt P03367 (gag-pol), UniProt Q9YQ30 (HIV-1 Protease)

Reference:

1. Adachi A et al "Production of acquired immunodeficiency syndrome-associated retrovirus in human and nonhuman cells transfected with an infectious molecular clone" J Virol 59: 284 -291(1986) PMID: 3016298
2. Saitoh A et al "Overproduction of human immunodeficiency virus type I reverse transcriptase in Escherichia coli and purification of the enzyme" Microbiol Immunol 34:509-521 (1990) PMID: 1699113

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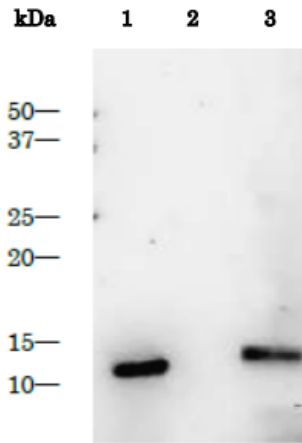


Fig. 1 Detection of HIV-1 protease in the extract of HIV-1 infected cells by Western blot using anti-HIV-1 protease antibody. 1: Purified HIV-1 protease (1 ng, Catalog #05-013) 2: Extract of MT4 cells 3: Extract of MT4 cells infected with HIV-1 (LAI strain). The antiserum was used at 1/2,000 dilution.

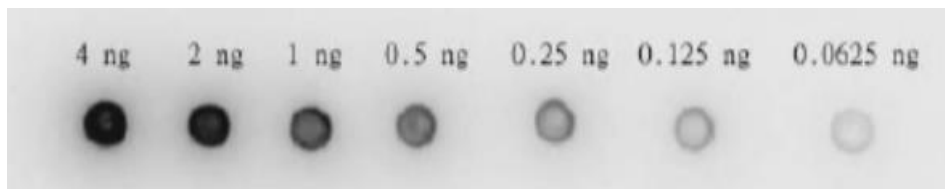


Fig. 2 Dot blot of HIV-1 protease using anti-HIV-1 protease antibody at a 1/2,000 dilution. Second antibody, goat anti-rabbit IgG antibody conjugated with HRP was used at 1/5,000 dilution. An ECL system was used.

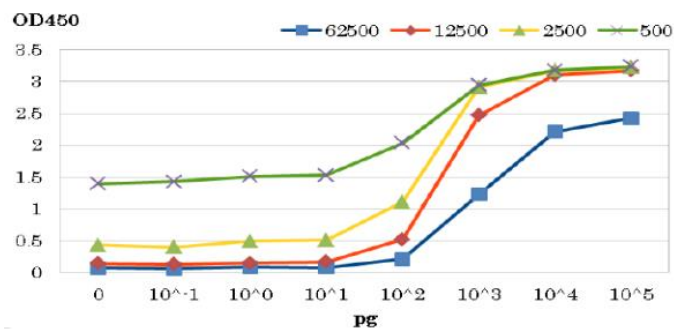


Fig. 3 ELISA of HIV-1 protease with anti-HIV-1 protease antibody. The antibody was used at dilutions indicated above. Purified Protease was spotted in wells.