

Anti-HIV-1/HIV-2 protease [1696] Standard Size Ab00806-47.0

This reformatted human antibody was made using the variable domain sequences of the original Mouse IgG format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Human IgA2, Kappa

Clone Number: 1696

Alternative Name(s) of Target: HIV-1 PR; HIV-2 PR; HIV-1 protease; HIV-2 protease; HIV1 PR; HIV2 PR; HIV1 protease; HIV2 protease

UniProt Accession Number of Target Protein: O90777

Published Application(s): neutralize, WB, ELISA

Published Species Reactivity: HIV-1, HIV-2

Immunogen: 1696 was prepared by generating a hybridoma cell line, fusing myeloma cells with splenocytes derived from BALB/c mice immunized with HIV-1 PR in the presence of Freund's adjuvant.

Specificity: 1696 binds to HIV-PR of both HIV-1 and HIV-2 (IgG 1696: HIV-1 PR pH5.7 ~350 µM; pH7.4 ~100 nM - HIV-2 PR pH5.7 no measurable interaction; pH7.4 ~30 nM -- Fab 1696: HIV-1 PR pH5.7 ~410 nM; pH7.4 ~130 nM - HIV-2 PR pH5.7 no measurable interaction; pH7.4 ~40 nM-- determined by ELISA). The antibody binds to the N-terminal region of the enzyme, and binding is inhibited by the peptide fragment PQITLWQ which represents residues 1-7. Western blot binding assays show that 1696 recognizes the mature and processed form of the enzyme, but not the precursor which possesses 20 residues upstream from the cleavage site. The N-terminus has a well conserved structure between HIV-1 PR and HIV-2 PR. HIV-PR is a homodimeric aspartate protease that specifically cleaves the viral Gag and Gag/Pol polypeptide precursor. A correlation has been observed between the activity of the protease and the degree of infectivity, and so this protein is a major antiviral target.

Application Notes: 1696 mAb can inhibit the catalytic activity of both HIV-1 and HIV-2 HIV-PR (1696 IgG HIV-1 PR IC50 ~0.6 nM; HIV-2 PR IC50 ~1.5 nM -- 1696 Fab HIV-1 PR IC50 ~1.1 nM; HIV-2 PR IC50 ~2.6 nM). Inhibition by 1696 is mediated by the destabilization of the active form of the active HIV-PR homodimer through binding to the N-terminus, which constitutes a large percentage of the interface between the monomers. The Fab fragment was generated by incubation of the antibody with pepsin. Binding constants of 1696 can be determined by ELISA. 1696 shows reactivity to the mature processed HIV-PR and not to the precursor by WB.

Antibody First Published in: Lescar et al. Inhibition of the HIV-1 and HIV-2 proteases by a monoclonal

antibody Protein Sci. 1999 Dec; 8(12): 2686–2696. [PMID:](#)

Note on publication: Describes the generation of the mAb 1696, its functional characterization and the determination of the crystal structure of the Fab fragment.

Product Form

Size: 50 µg Purified antibody.

Purification: Affinity Purified using a recombinant lectin column

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.