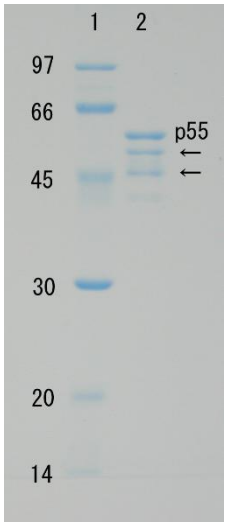
HIV-1 Gag p55, useful as HIV protease substrate

Product code	05-009　　05-010
Size	20 µg　　100 µg
Storage	-80℃.　Avoid freeze-thaw cycles.
Product Description	Recombinant full-size HIV-1, subtype 1、clone pNL4-3 (Ref 2), expressed in *E. coli.*
Concentration	0.5～1.0 mg/ml as measured by BCA method
Buffer	20% glycerol, 20mM Tris-HCl (pH7.5), 50mM NaCl, 10mM 2-mercaptoethanol
Purity	Over 90% by SDS-PAGE (CBB staining)
Application	1. Substrate for the HIV-1 protease activity assay. 2. It can be used in detection of anti-HIV-1 Gag antibody in Western blotting or ELISA. All the anti-HIV-1 Gag antibodies such as anti-p17 antibody, anti-p24 antibody and anti-p15 antibody can be measured at the same time.
Background	HIV-1 Gag p55 is a precursor protein of several proteins that form the core structure of AIDS virus, which are indispensable to their reproduction. This protein is digested by HIV-1 protease, first into intermediate products p41 and p15. Then p41 is digested into matrix protein p17 and capsid protein p24. Protein p15 is further digested into nucleocapsid protein p7, and to p6 and p1 whose functions are unknown (1).
Data Image	 **Fig.1 Polyacrylamide gel electrophoresis of HIV-1 p55 protein** The arrows show degradation products.
Data Link	GenBank: AAK08483.1　(HIV-1 Gag p55 sequence of pNL4-3)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

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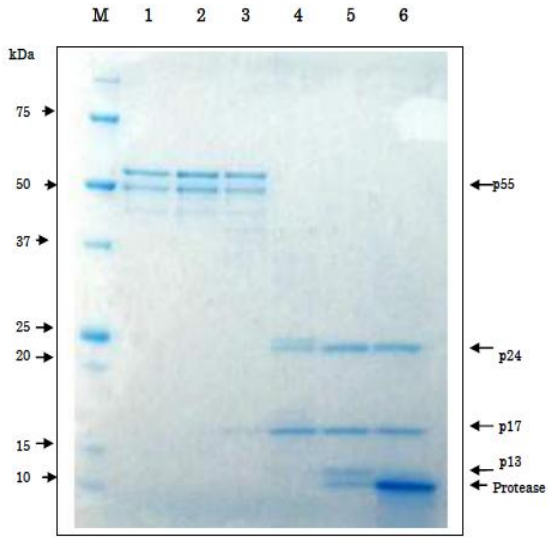
Data Image: 05-009, 05-010 HIV-1 Gag p55

Fig.2 Proteolytic processing of HIV-1 Gag p55 proprotein by HIV-1 protease in vitro



As the substrate, recombinant Gag p55 (1 µg, BioAcademia 05-009) was used in 20 µl reaction volume. The reaction was carried by incubating at 37℃ for 3 h and stopped by adding SDS-PAGE sample buffer. 1; no protease, 2: 0.16 pg. 3; 1.6 pg. 4; 16 pg 5; 0.16 µg . 6; 1.6 µg protease. Note that two degradation bands are observed in the preparation of p55 substrate. In lane 4, p25 band is visible and in lane 5, p13 band is visible.

References:

1. Freed EO "HIV-1 gag proteins: diverse functions in the virus life cycle." *Virology* **251**:1-15 (1998) PMID: 9813197
2. 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
3. Saito A *et al* "Overproduction, purification, and diagnostic use of the recombinant HIV-1 Gag proteins, the precursor protein p55 and the processed products p17, p24, and p15." *Microbiol. Immunol.* **39**:473-483 (1995) PMID: 8569532

Related products

65-013 Anti-HIV-1 Gag p55 antibody, rabbit serum

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