

HIV-1 Gag p15

05-007 20 µg, 05-008 100 µg

HIV-1 Gag p15 is processed by digestion of its precursor Gag p55 by HIV-1 protease. This protein is further digested into nucleocapsid protein p7 and into p6 and p1 of unknown function. This digestion is promoted by binding of HIV-1 genome RNA and the two Zn finger motifs that exist in the p7 region. The produced nucleocapsid protein p7 regulates the RNA function by directly binding to HIV-1 genome RNA (1).

HIV-1 Gag p15 was over-expressed as a recombinant protein in *E. coli* with a plasmid carrying the Gag p15 coding region of HIV-1 virus, subtype B (2), and highly purified by several steps of chromatography (3). Its molecular size is 15 kD, same as that of p15 purified from AIDS virus particles (Fig 1).

Applications

- 1) It can be used as a substrate for HIV-1 protease in the presence of HIV-1 genomic RNA.
- 2) It can be used in studies of structure and function of AIDS virus as precursor of nucleocapsid p7 protein that binds to HIV-1 genome RNA.
- 3) It can be used as p15 antigen in detection of anti-HIV-1 p15 antibody in Western blotting or ELISA.
- 4) It can be used as a standard for the quantitative analysis of HIV-1 p15 antigen.

Specification

Purity: Over 90% by SDS-PAGE (CBB staining)

Protein concentration: 0.42 mg/ml as measured by BCA method

Form: 50% glycerol, 20 mM Tris-HCl (pH 7.5), 50 mM NaCl, 10 mM mercaptoethanol

Storage: -20°C

Data Link GenBank: [AAA44988.1](https://www.ncbi.nlm.nih.gov/nuccore/AAA44988.1)

References

1. Freed EO "HIV-1 gag proteins: diverse functions in the virus life cycle." *Virology* **251**:1-15 (1998) PMID: [9813197](https://pubmed.ncbi.nlm.nih.gov/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](https://pubmed.ncbi.nlm.nih.gov/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](https://pubmed.ncbi.nlm.nih.gov/8569532/)

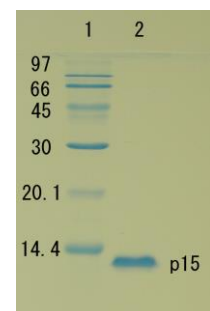


Fig.1 Polyacrylamide gel electrophoresis of HIV-1 p15 protein