

HIV-1 Gag p24

05-005 20 ug, 05-006 100 ug

HIV-1 Gag p24 is a capsid protein that constitutes the core of AIDS virus, HIV-1, and is produced by digestion of its precursor, Gag p55, by HIV-1 protease. This protein is indispensable for reproduction of AIDS virus and constitutes an essential element in the virus particle (1). As this protein is detectable from the early stage of AIDS virus infection, and reflects the amount of virus in the blood, it is used as a marker for observing the patient's condition during and after treatment.

This protein was over-expressed as a soluble recombinant protein in *E. coli* with a plasmid carrying the Gag p24 coding region of HIV-1 virus, subtype B (2), and highly purified by several steps of chromatography (3). Its molecular weight is 24 kD, same as that of p24 purified from HIV-1 virus particles (Fig 1).

Applications

- 1)
- 2) In ELISA assay as a standard in titration of p24 antigens
- 3) As a standard for p24 in Western blotting.
- 4) It can be used in the studies of structure and function of HIV-1 virus as it constitutes HIV-1 core as a capsid protein since it is soluble under physiological conditions.

Specification

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

Protein concentration: 1 mg/ml as measured by BCA method

Form: 50% glycerol, 20mM Tris-HCl (pH7.5), 50mM NaCl, 10mM mercaptoethanol

Storage: -20°C

Data Link : UniProtKB [P12497](#) (POL_HV1N5)

References: This protein was described and used in Ref 3 and 4

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. Tanaka N *et al* "A simple method for overproduction and purification of p24 Gag protein of human immunodeficiency virus type 1." *Microbiol Immunol* **36**: 823-831 (1992) PMID: [1474933](#)
4. 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](#)

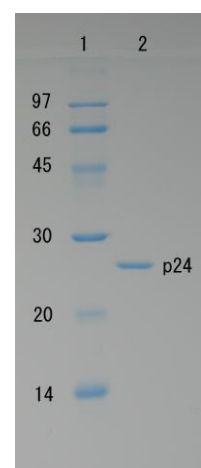


Fig.1 Polyacrylamide gel electrophoresis of HIV-1 p24 protein