

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 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) It can be used as a standard in titration of p24 antigens as it indicates the amount of HIV-1 virus. This measurement is useful for diagnosis of virus infection and assessing the amount of virus during and after treatment.
- 2) It can be used as antigen for Western blotting or ELISA of anti-HIV-1 p24 antibody.
- 3) 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.

Specification

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

Protein concentration: 1 mg/ml measured by BCA method

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

Storage: -20°C

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

References

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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](https://pubmed.ncbi.nlm.nih.gov/1474933/)
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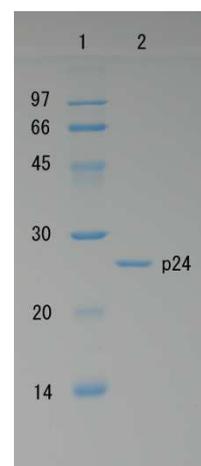


Fig.1 Polyacrylamide gel electrophoresis of HIV-1 p24 protein