

HIV-1 p17, p24, gp120, gp41 Human Immunodeficiency Virus 1 Antigens recombinant, *E. coli*

Cat. No.	Amount
PR-1202	100 µg

For *in vitro* use only
Quality guaranteed for 12 months
Store at -20°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM PBS pH 7.8, 20 mM NaCl, 1 mM DTT and 8 M urea.

Application

May be used in ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.

Specificity

Immuno reactive with all sera of HIV-1 infected individuals.

Purity

>95% by SDS-PAGE and HPLC

Description

The protein contains the full-length sequence of HIV-1 core and envelope proteins: Core protein p17 (Matrix protein), Core protein p24 (Core antigen) fused with membrane glycoprotein (gp120) and transmembrane glycoprotein (gp41).

The fusion protein was purified by proprietary chromatographic technique.

Background

HIV belongs to the retrovirus family, distinguished by possession of a viral reverse transcriptase that transcribes viral RNA into DNA which is integrated into the host-cell genome.

The outer envelope is acquired during virion budding and is studded with spikes formed by the two major viral-envelope glycoproteins (the surface protein gp120 and the transmembrane protein gp41).

The central core contains four viral proteins (p24 - the major capsid protein, p17 - a matrix protein, p9, and p7), two copies of the HIV RNA genome (to which p7 and p9 are bound), and three viral enzymes (reverse transcriptase, integrase, and protease) essential for viral replication.

Selected References:

- Wu *et al.* (2004) Total chemical synthesis of N-myristoylated HIV-1 matrix protein p17: structural and mechanistic implications of p17 myristoylation. *Proc. Natl. Acad. Sci. USA* **101**:11587.
- Sanders *et al.* (2004) Evolution of the HIV-1 envelope glycoproteins with a disulfide bond between gp120 and gp41. *Retrovirology* **1**:3.
- Ribas *et al.* (2003) Performance of a quantitative human immunodeficiency virus type 1 p24 antigen assay on various HIV-1 subtypes for the follow-up of human immunodeficiency type 1 seropositive individuals. *J. Virol. Methods* **113**:29.
- Schupbach *et al.* (2003) HIV-1 p24 antigen is a significant inverse correlate of CD4 T-cell change in patients with suppressed viremia under long-term antiretroviral therapy. *J. Acquir. Immune. Defic. Syndr.* **33**:292.
- Castilho *et al.* (2005) Heterologous expression, characterization and structural studies of a hydrophobic peptide from the HIV-1 p24 protein. *Peptides* **26**:24.