

HIV-1 p24 core Human Immunodeficiency Virus 1 Antigen recombinant, *E. coli*

Cat. No.	Amount
PR-1231	1 mg

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

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 50 mM Tris-HCl pH 7.2 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

Immunoreactive with all sera of HIV-1 infected individuals.

Molecular Weight

50 kDa

Purity

>95% by SDS-PAGE and HPLC

Description

HIV-1 p24 Core is a GST-tagged 50kDa non-glycosylated polypeptide chain, containing the full length sequence of the HIV-1 p24.

Human immunodeficiency virus (HIV) is a retrovirus that can lead to a condition in which the immune system begins to fail, leading to opportunistic infections. HIV primarily infects vital cells in the human immune system such as helper T cells (specifically CD4+ T cells), macrophages and dendritic cells. HIV infection leads to low levels of CD4+ T cells through three main mechanisms: firstly, direct viral killing of infected cells; secondly, increased rates of apoptosis in infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytes that recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunity is lost, and the body becomes progressively more susceptible to opportunistic infections. HIV was classified as a member of the genus *Lentivirus*, part of the family of *Retroviridae*. Lentiviruses have many common morphologies and biological properties. Many species are infected by lentiviruses, which are characteristically responsible for long-duration illnesses with a long incubation period. Lentiviruses are transmitted as single-stranded, positive-sense, enveloped RNA viruses. Upon entry of the target cell, the viral RNA genome is converted to double-stranded DNA by a virally encoded reverse transcriptase that is present in the virus particle. This viral DNA is then integrated into the cellular DNA by a virally encoded integrase so that the genome can be transcribed. Once the virus has infected the cell, two pathways are possible: either the virus becomes latent and the infected cell continues to function, or the virus becomes active and replicates, and a large number of virus particles are liberated that can then infect other cells.

Selected References:

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- Eyeson *et al.* (2003) Evidence for Gag p24-specific CD4 T cells with reduced susceptibility to R5 HIV-1 infection in a UK cohort of HIV exposed-seronegative subjects. *AIDS* **17**:2299.
- Ribas *et al.* (2003) Performance of a quantitative human



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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.