

## HIV-1 Envelope Human Immunodeficiency Virus 1 Antigen recombinant, *E. coli*

Cat. No.	Amount
PR-1200	100 µg

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

### Avoid freeze / thaw cycles

### Form

Liquid. Supplied in 0.5x PBS containing 0.05% SDS.

### Activity

This antigen was thoroughly tested in various tests as well as ELISA using the standard BBI serum panels.

All antibody detection tests on this antigen were as sensitive or more than the standard Abott third generation tests.

### Application

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

### Purity

>98% by HPLC

**Description** This antigen is an *E. coli*-derived recombinant protein that composes all of the reported immunogenic determinants found in gp41 and at the C-terminus of gp120. The gene encoding this fusion protein was synthesized using codons optimized for *E. coli* expression and doesn't represent a linear HIV-1 envelope sequence. HIV-1 is a non-glycosylated, 233 amino acid polypeptide chain, having a molecular mass of 27.28 kDa.

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 envelope glycoprotein gp160 from HIV, containing two non-covalently associated subunits, gp120 and gp41, mediates the membrane fusion activity of the virus. The surface subunit gp120 attaches to the receptor

(CD4) and the coreceptor (CCR5 or CXCR4) on the cell surface, and subsequent conformational changes within the Env complex lead to membrane fusion mediated by the transmembrane subunit gp41.

### Selected References:

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- Marin et al. (2004) Antigenic activity of three chimeric synthetic peptides of the transmembrane (gp41) and the envelope (gp120) glycoproteins of HIV-1 virus. *Prep. Biochem. Biotechnol.* **34**:227.
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- Gerber et al. (2004) Inhibition of HIV-1 envelope glycoprotein-mediated cell fusion by a DL-amino acid-containing fusion peptide: possible recognition of the fusion complex. *J. Biol. Chem.* **279**:48224.
- Sanders et al. (2004) Evolution of the HIV-1 envelope glycoproteins with a disulfide bond between gp120 and gp41. *Retrovirology.* **1**:3.