Data sheet

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Jena Bioscience

HIV-1 gp41

Human Immunodeficiency Virus 1 Antigen

recombinant, *E. coli*

Cat. No.	Amount
PR-1204	100 µg

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

Avoid freeze / thaw cycles

Form
Liquid. Supplied in 20mM PBS pH 7.8, 20mM NaCl, 1mM DTT and 8M 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-I infected individuals.

Purity
>95% by SDS-PAGE

Description
HIV-1 env gp41 is a non-glycosylated 288 amino acids polypeptide chain (aa 466-753) having a molecular mass of 32kDa. The protein is fused to β-galactosidase (114 kDa) at the N- terminus.

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:

Zwick *et al.* (2005) Anti-human immunodeficiency virus type 1 (HIV-1) antibodies 2F5 and 4E10 require surprisingly few crucial residues in the membrane-proximal external region of glycoprotein gp41 to neutralize HIV-1. *J. Virol.* **79**:1252.
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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.
Zhang *et al.* (2004) Induction of mucosal and systemic neutralizing antibodies against human immunodeficiency virus type 1 (HIV-1) by oral immunization with bovine Papillomavirus-HIV-1 gp41 chimeric virus-like particles. *J. Virol.* **78**:8342.
Gallo *et al.* (2004) Temperature-dependent intermediates in HIV-1 envelope glycoprotein-mediated fusion revealed by inhibitors that target N- and C-terminal helical regions of HIV-1 gp41. *Biochemistry.* **43**:8230.