



HIV-1 Nef (residues 3-190)

Human Immunodeficiency Virus 1 Antigen recombinant, *E. coli*

Cat. No.	Amount
PR-1214	100 µg

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Molecular Weight: 134 kDa

Purity: > 95 % (SDS-PAGE, HPLC)

Form: liquid (Supplied in 20 mM Tris-HCl pH 8.0, 8 M urea and 10 mM beta-mercaptoethanol)

Applications:

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

Description:

The protein contains the fragment of HIV-1 Nef protein, amino acids 3-190, the molecular weight is 20 kDa. The HIV-1 nef is fused to beta-galactosidase (114 kDa) at the N-terminus. The 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. Human immunodeficiency virus type 1 (HIV-1) Nef is a membrane-associated protein that is produced at the earliest stage of viral gene expression and is a component of viral particles. Nef has been demonstrated to bind and downregulate cell-surface receptors CD4 and MHC I. In addition, Nef has been reported to have diverse effects on cellular signal transduction pathways. It interacts with various cellular protein kinases and acts both as a kinase substrate and as a modulator of kinase activity.

Specificity: Immuno reactive with all sera of HIV-I infected individuals.

Selected References:

- Tomiyama *et al.* (2005) Cutting Edge: Epitope-dependent effect of Nef-mediated HLA class I down-regulation on ability of HIV-1-specific CTLs to suppress HIV-1 replication. *J. Immunol.* **174**:36.
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- Churchill *et al.* (2004) Longitudinal analysis of nef/long terminal repeat-deleted HIV-1 in blood and cerebrospinal fluid of a long-term survivor who developed HIV-associated dementia. *J. Infect. Dis.* **190**:2181.
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- Choi *et al.* (2004) Conserved residues in the HIV-1 Nef hydrophobic pocket are essential for recruitment and activation of the Hck tyrosine kinase. *J. Mol. Biol.* **343**:1255.
- Cullen *et al.* (1994) The role of Nef in the replication cycle of the human and simian immunodeficiency viruses. *Virology* **205**:1.
- Grzesiek *et al.* (1996) The solution structure of HIV-1 Nef reveals an unexpected fold and permits delineation of the binding surface for the SH3 domain of Hck tyrosine protein kinase. *Nat. Struct. Biol.* **3**:340.