



HIV-1 Nef

HIV-1 Nef is one of the accessory proteins synthesized in the early stage of AIDS virus reproduction and is abundantly found in infected cells. The name derives from its negative factor thought at the beginning but presently it is remarked as the protein which bears the most distinctive biological characteristic of AIDS virus (1). The protein interacts directly with the signal transduction protein of the host T cells and works effectively on AIDS infection or on long term survival of the infected cells or induces apoptosis of non-infected cells (2). It is also involved in endocytosis and degradation of the cell surface receptor proteins such as CD4 and MH4 which are important for AIDS virus infection.

HIV-1 Nef protein was over-expressed as a recombinant protein in *E. coli* with a plasmid carrying the *nef* gene of HIV-1 virus, subtype B (3) and highly purified by several steps of chromatography. Its molecular size is 27kD, same as that of Nef purified from AIDS virus particles (Fig 1).

Applications

- 1) For functional studies of HIV-1 Nef protein
- 2) Used as standard for the titration analysis of HIV-1 Nef antigen
- 3) It can be used as Nef antigen in detection of anti-HIV-1 Nef antibody by Western blotting or ELISA.

Purity: Over 90% by SDS-PAGE (CBB staining)

Protein concentration: 0.48 mg/ml as determined by BCA method

Form: 50% glycerol, 20 mM Tris-HCl (pH 7.5), 50 mM NaCl, 10 mM mercaptoethanol

Size: 20ug

Storage: Sent at 4°C or -20°C. Upon arrival, briefly centrifuge and store at -20°C

Data Link GenBank: [AAA44988.1](https://www.ncbi.nlm.nih.gov/nucl/AAA44988.1)

References

1. Arora VK *et al* "Nef: agent of cell subversion." *Microbes Infect* **4**: 189-199 (2002) Review PMID: [11880052](https://pubmed.ncbi.nlm.nih.gov/11880052/)
2. Fackler OT and Baur AS "Live and let die: Nef functions beyond HIV replication." *Immunity* **16**:493-497 (2002) Review PMID: [11970873](https://pubmed.ncbi.nlm.nih.gov/11970873/)
3. Adachi A *et al* "Production of acquired immunodeficiency syndrome-associated retrovirus in human and nonhuman cells transfected with an infectious molecular clone." *J Virol* **59**: 284 -291(1986) PMID: [3016298](https://pubmed.ncbi.nlm.nih.gov/3016298/)



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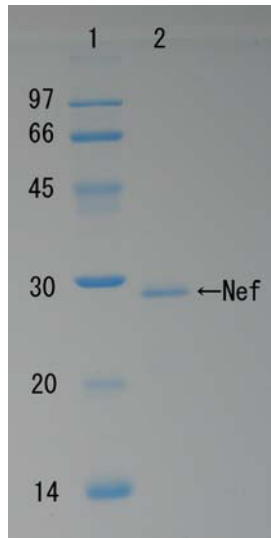


Fig.1 Polyacrylamide gel electrophoresis of HIV-1 Nef protein.

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