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# SCIENTIFIC

# HIV-1 gp120 MN

**Description:**HIV-1 gp120 MN Recombinant- is the external envelope protein, full-length 100-120 kDa, derived from the env. gene of HIV-1 and glycosylated with N-linked sµgars and produced using baculovirus vectors in insect cells. The gp120MN is dual tropic meaning it binds to CCR5 and X4.Purified under conditions that maintain the tetriatary structure of the molecule.

Source: Baculovirus Insect Cells.

Physical Appearance: Sterile filtered colorless clear solution.

Purity: Greater than 90.0% as determined by HPLC analysis and SDS-PAGE.

# Specificty:

Immunoreactive with sera from HIV infected individuals. Western blots: 0.1-1.0

#### Formulation:

The HIV-1 gp120 protein solution contains 30mM Tris, pH-7.6, 150mM NaCl and 0.01% Triton N101.

#### Stability:

Recombinant HIV -1 gp120 MN although stable at 4°C for 3 weeks, should be stored below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

# Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

# Applications:

HIV-1 gp120 antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.

### Introduction:

Human immunodeficiency virus (HIV) is a retrovirusthat can lead to a condition in which the immune systembegins to fail, leading to opportunistic infections. HIV primarily infects vital cells in the humanimmune systemsuch as helper T cells(specifically CD4+ T cells), macrophagesand 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 apoptosisin infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytesthat recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunityis 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 genomeis converted to double-stranded DNAby a virally encoded reverse transcriptasethat is present in the virus particle. This viral DNA is then integrated into the cellular DNA by a virally encoded integraseso that the genome can be transcribed. Once the virus has infected the cell, two pathways are possible: either the virus becomes latentand the







www.neobiolab.com info@neobiolab.com 888.754.5670, +1 617.500.7103 United States 0800.088.5164, +44 020.8123.1558 United Kingdom 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.



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