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HIV-1 gp120 LAV

Description:HIV-1 gp120 LAV isolate 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. Purified under conditions that maintain the tertiary structure of the biologically active molecule. HIV-1 gp120 LAV sequence is identical to the predicted amino acid sequence of gp120 from pNL4-3 (Adachi et al. [1986], J. Virol. 59, 284-291; GenBank accession number M19921).

Source: Baculovirus Insect Cells.

Physical Appearance: Sterile filtered colorless clear solution.

Amino Acid Sequence:IPGEKLWVTV YYGVPVWKEA TTTLFCASDA KAYDTEVHNV ATHACVPTDP NPQEVVLVNV TENFNMWKND MVEQMHEDII SLWDQSLKPC VKLTPLCVSL KCTDLKNDTN TNSSSGRMIM EKGEIKNCSF NISTSIRDKV QKEYAFFYKL DIVPIDNTSY RLISCNTSVI TQACPKVSFE PIPIHYCAPA GFAILKCNNK TFNGTGPCTN VSTVQCTHGI RPVVSTQLLL NG

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 protein solution contains 10mM Tris-Cl pH-7.6, 150mM NaCl and 0.01% Triton N-101.

Stability:
Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).Avoid multiple freeze-thaw cycles.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drμgs, 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 throμgh 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

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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 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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