Recombinant HIV-1 gp120 LAV Envelope

Catalog No.	CS533A	**Quantity:**	2 µg
	CS533B		10 µg
	CS533C		100 µg

Description:

Human immunodeficiency virus (HIV) is a retrovirus that can lead to a condition in which the immune system begins to fail, leading to opportunistic infections. HIV primarily infects vital cells in the human immune system such as helper T cells (specifically CD4+ T cells), macrophages and 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 apoptosis in infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytes that recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunity is 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 genome is converted to double-stranded DNA by a virally encoded reverse transcriptase that is present in the virus particle. This viral DNA is then integrated into the cellular DNA by a virally encoded integrase so that the genome can be transcribed. Once the virus has infected the cell, two pathways are possible: either the virus becomes latent and 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.

Recombinant HIV-1 gp120 LAV isolate is the full-length 100-120 kDa external envelope protein glycosylated with N-linked sugars using baculovirus vectors in insect cells. it is purified under conditions that maintain the tertiary structure of the biologically active molecule. The 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

Formulation: The protein solution contains 10 mM Tris-Cl, pH-7.6, + 150 mM NaCl + 0.01% Triton N -101.

Purity: >90% as determined by HPLC analysis and SDS-PAGE.

Specific Activity: Immunoreactive with sera from HIV infected individuals.

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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 NGSLAEEDVV IRSANFTDNA KTIIVQLNTS VEINCTRPNN NTRKSIRIQR GPGRAFVTIG KIGNMRQAHC NISRAKWNAT LKQIASKLRE QFGNNKTIIF KQSSGGDPEI VTHSFNCGGE FFYCNSTQLF NSTWFNSTWS TEGSNNTEGS DTITLPCRIK QFINMWQEVG KAMYAPPISG QIRCSSNITG LLLTRDGGNN NNGSEIFRPG GGDMRDNWRS ELYKYKVVKI EPLGVAPTKA KRRVVQREKR

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

Application Note: Western blots: 0.1-1.0 µg/strip.
The optimal concentration should be determined by the user for each specific application.

Storage & 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 such as 0.1% HSA or BSA. This depends upon the particular application employed. **Avoid repeated freeze-thaw cycles.**

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

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