Recombinant HIV env protein

Cat. No. env-163H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	HIV-1 envelope is an E.coli-derived recombinant protein that composes all of the reported immunogenic determinants found in gp41 and a small portion of gp120. The gene encoding this fusion protein was synthesized using codons optimized for E.coli expression and doesn't represent a linear HIV-1 envelope sequence. HIV-1 is a non-glycosylated, 233 amino acid polypeptide chain, having a molecular mass of 27275.88kDa and pI=9.68. HIV-1 envelope protein spans the C-Terminus of gp120 and most of gp41. Superior diagnostic reagent for HIV-1 and HIV type-O detection. Detects all HIV-1 and HIV-type O infected individuals responding to envelope proteins.
Species	HIV
Source	E.coli
Description	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

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	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 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.
Form	Sterile filtered colorless clear solution. The HIV-1 contains 0.5X PBS & 6M urea.
Purity	Greater than 95.0% as determined by HPLC analysis and SDS-PAGE.
Applications	HIV-1 Envelope antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.
Usage	The 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.
Stability	HIV-1 Envelope although stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.
Specificity	Immunoreactive with all sera of HIV-1 and HIV-type O infected individuals and with 60-80% of HIV-2 infected individuals.
Shipping	Ice Packs

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GENE INFORMATION

Gene Name	env gp160; envelope glycoprotein [Human immunodeficiency virus 1]
Official Symbol	env
Synonyms	env; gp160; envelope glycoprotein; Envelope surface glycoprotein gp160, precursor; hypothetical protein; Envelope surface glycoprotein gp120; Envelope transmembrane domain
Gene ID	155971
Protein Refseq	NP_057856.1
UniProt ID	P04578

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