

Recombinant HIV env protein, β-gal-tagged

Cat. No. env-171H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	HIV-1 gp41 Biotin labeled is a non-glycosylated polypeptide chain, containing 288 amino acids (466-753 a.a.) and having an Mw of 32kDa. HIV1 gp41 biotin labeled is fused to an 114kDa beta-galactosidase tag at N-terminus having a total Mw of 146kDa.
Species	HIV
Source	E.coli
ProteinLength	288 amino acids (466-753 a.a.)
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.

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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.

Form	Sterile filtered colorless clear solution. 1mg/ml in 20mM Tris-HCl pH-8, 20mM B-ME and 8M urea.
Molecular Mass	146kDa
Purity	Greater than 95.0% as determined by SDS-PAGE.
Usage	The products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.
Stability	HIV-1 gp41 Biotin although stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.
Specificity	Reacts with Human HIV positive serum.
Shipping	Ice Packs

GENE INFORMATION

Gene Name [env gp160; envelope glycoprotein \[Human immunodeficiency virus 1 \]](#)

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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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