

Recombinant Human Immunodeficiency Virus Type 1 gp41 protein, His-tagged

DAG1524 HIV

Lot. No. (See product label)

PRODUCT INFORMATION

Product overview	HIV-1 gp41 His tag Recombinant- is a non-glycosylated 69 kDa polypeptide chain, containing the envelope glycoprotein 41 (subtype-B) gene of the HIV1 having a 6X His tag / chaperone protein on the N-terminus.
Antigen Description	gp41/120 is the major HIV protein associated with the HIV envelope. It functions as the viral antireceptor or attachment protein. gp41 (or TM) traverses the envelope, whereas gp120 is present on the outer surface and is noncovalently attached to gp41. The precursor of gp120/41 (gp160) is synthesized in the endoplasmic reticulum and is transported via the golgi body to the cell surface. Upon activation of the envelope glycoprotein (gp120/41) by cellular receptors, gp41 undergoes conformational changes that mediate fusion of the viral and cellular membranes
Source	E. coli
Species	HIV
Tag	His
Conjugate	N/A
Form	Sterile filtered colorless clear solution.
Purity	Greater than 95.0% as determined by HPLC analysis and SDS-PAGE.
Characteristic	Immunoreactive with all sera of HIV-1 infected individuals.
Applications	HIV-1 gp41 antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.
Usage	The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

PACKAGING

Stability	stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.
Buffer	20mM sodium carbonate, pH-9.6 & 0.02 % sodium azide.

BACKGROUND

Introduction

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.

Keywords

HIV-1 gp41; HIV1 gp41; Envelope surface glycoprotein gp41; Glycoprotein 41; gp41 glycoprotein; Human Immunodeficiency Virus 1; SU; Surface protein; Retroviridae; Lentivirus; human immunodeficiency virus; Env antibody; Env polyprotein; Envelope glycoprotein gp41

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