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## Product Data Sheet

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Product Name: HIV-1 gp41  
Cat. No.: GP25393  
Batch No.: 1

### Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Formulation	8M urea, 20mM Tris-HCl pH 8.0, 10mM B-mercaptoethanol.		

### 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.

### Stability

HIV-1 gp41 although stable at 4°C for 1 week, should be stored below -18°C. Please

**Caution: Product has not been fully validated for medical applications. For research use only.**

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prevent freeze thaw cycles.

### Background

HIV-1 env gp41 Strain IIIB is a non-glycosylated 288 amino acids polypeptide chain (a.a. 466-753) having a molecular mass of 32kDa. The protein is fused to B-galactosidase (114 kDa) at the N- terminus.

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