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HIV-1 Envelope

HIV-1 Envelope Recombinant
VAG0303

Product Overview

Name	HIV-1 Envelope

Description

HIV-1 Envelope Recombinant

Introduction

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 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.

Source

Escherichia Coli.

Physical Appearance

Sterile filtered colorless clear solution.

Formulation

The HIV-1 contains 0.5X PBS & 6M urea.

Stability

HIV-1 Envelope although stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.

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.

Specificity

Immunoreactive with all sera of HIV-1 and HIV-type O infected individuals and with 60-80% of HIV-2 infected individuals.

Precautions

HIV-1 Envelope is for research use only and not for use in diagnostic or therapeutic procedures.