



Recombinant HIV type 1 Envelope Glycoprotein 120 (DAG4016)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

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| Product Overview | Recombinant Human immunodeficiency virus-1 gp120 LAV Envelope |
| Species | HIV |
| Purity | Greater than 90% as determined by HPLC analysis and SDS-PAGE. |
| Conjugate | Unconjugated |
| Applications | ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems. |
| Preservative | None |
| Storage | 2-8°C short term, -20°C long term |

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

Human Immunodeficiency Virus-1 gp120; HIV-1 gp120
