



Recombinant HIV type 1 Integrase Protein [Biotin] (DAG-T1099)

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

PRODUCT INFORMATION

Product Overview	E.coli derived recombinant protein. The protein contains the HIV-1 immunodominant regions from pol protein (integrase). Horseradish Biotin labeled (B).
Species	HIV
Conjugate	Biotin
Preservative	None
Storage	Store at 2–8 °C

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
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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.

Keywords	Human immunodeficiency virus 1; HIV-1
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