Recombinant Human Immunodeficiency Virus Tat Protein [HIV-1/Clade B (BH10)]

Cat. No. HUM-413 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	HIV-1 Tat Clade B protein is recombinantly produced in E. coli and
Background	Immediately after HIV infects a cell, the virion RNA is copied into DNA and the proviral genome is transported to the nucleus and integrated into the host cell genome. Once integrated into the host chromosome, the HIV becomes subject to regulation by cellular transcription factors, as well as its own regulatory proteins. HIV transcription is controlled primarily by the trans-activator protein (Tat). Tat is one of two essential viral regulatory factors (Tat and Rev) for gene expression. Two forms are known, Tat-1 exon (minor form, 72 amino acids) and Tat-2 exon (major form, 86 amino acids) and low levels of both proteins are found in persistently infected cells. Tat has been localized primarily in the nucleolus/nucleus by immunofluorescence. It acts by binding to the TAR RNA element and activating transcription initiation and elongation from the LTR promoter, preventing the 5′ LTR AATAAA polyadenylation signal from causing premature termination of transcription and polyadenylation. It is the first eukaryotic transcription factor known to interact with RNA rather than DNA and may have similarities with prokaryotic anti-termination factors. Tat can be secreted by infected cells and extracellular Tat can be taken up by cells in culture through interactions with heparin sulfate proteoglycans displayed on their surface. Subsequently, Tat reaches their nucleus and can activate a variety of cellular genes including cytokines and cytokine coreceptors.
Formulation	Lyophilized in 0.1% glycerol.

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Notes	This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.
Type	Recombinant
ClassID 1	Infectious Disease

GENE INFORMATION

Synonyms	HIV Tat [HIV-1/Clade B (BH10)]

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