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## Product Data Sheet

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Product Name: HIV-1 TAT Clade-D

Cat. No.: GP25415

Batch No.: 1

### Product Data

|                     |       |                    |                       |
|---------------------|-------|--------------------|-----------------------|
| Purity              | >98%  | Source             | Escherichia Coli.     |
| Physical Appearance | solid | Shipping Condition | Shipped at Room temp. |

Solubility It is recommended to reconstitute the lyophilized HIV-1 TAT in sterile 18MΩ-cm H<sub>2</sub>O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.

Formulation Lyophilized with 10% glycerol.

### Introduction

Human immunodeficiency virus type-1 (HIV-1) regulatory Tat protein plays an essential role in viral replication (Jones KA, 1994) and infectivity (Arya SK, 1985; Fisher AG, 1986). In addition, during acute infection, Tat is released extracellularly by infected cells (Chang HC, 1997; Ensoli B, 1990) and is taken up by neighboring cells where it transactivates viral replication (Ensoli B, 1993) and increases virus infectivity. HIV-1 Tat activates transcription of HIV-1 viral genes by inducing phosphorylation of the C-terminal domain (CTD) of RNA polymerase II (RNAPII). Tat can also disturb cellular metabolism by inhibiting proliferation of antigen-specific T lymphocytes and by inducing cellular apoptosis. Tat-induced apoptosis of T-cells is attributed, in part, to the distortion of microtubules polymerization. LIS1 is a microtubule-associated protein that facilitates microtubule polymerization.

### Stability

Lyophilized HIV-1 TAT although stable at room temperature for 1 week, should be stored desiccated below -18°C . Upon reconstitution HIV-1 TAT should be stored at 4°C between 2-7 days and for future use below -18°C . For long-term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

### Background

HIV-1 TAT Clade-D Recombinant produced in E.coli is a single, non-glycosylated,

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polypeptide chain having the Accession number: AY194029.

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