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Datasheet for 000-001-M46

HIV tat 48-60

Overview

Description:	HIV-1 tat, (48-60) peptide - 000-001-M46
Item No.:	000-001-M46
Size:	1 mg
Origin:	HIV-1

Product Details

Background:	Translocation through the plasma membrane has been shown to be a major limiting step for the delivery of various macromolecules to the cytoplasm and other intracellular compartments (e.g., mitochondria, nucleus). Numerous studies have confirmed that specific peptide sequences known as cell penetrating peptides (CPP) derived from proteins able to cross the plasma membrane, can be added to various cargo and delivered across cell membranes. The cargo molecules that have been successfully transported into cells includes oligonucleotides, peptides, peptide nucleic acids, proteins and nanoparticles. One of these translocating peptides was derived from the HIV-1 Tat protein, specifically located within the first exon of the HIV tat protein. The specific HIV tat sequence is highly basic (cationic) and is readily added to peptides either as a preformed peptide with a site for direct conjugation to other molecules (typically a cysteine). Addition of the tat-cargo complex (5-50 uM concentration) to cells for 30-60 minutes results in the transfer of the tat-cargo complex to intracellular locations in a rapid, dose-dependent manner. The addition of nuclear or mitochondrial localization sequences has been shown to specifically direct the cargo to the nucleus or mitochondria respectively.
Synonyms:	Protein Tat, Transactivating regulatory protein, Human immunodeficiency virus type 1 (HIV-1), control peptide, blocking peptide
Species of Origin:	HIV-1
Type:	Peptide

Target Details

Purity/Specificity:	Greater than 95% specific peptide.

Application Details

Application Note:	HIV-1 tat, 48-60 Control Peptide is suitable for use in ELISA, Western Blot, Dot blot, PCA, and other assays. Control peptide should be used at 1.0 µg per 1.0 µl of antiserum in per assay. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.

Formulation

Physical State:	Lyophilized
Concentration:	1.0 mg/mL by dry weight
Buffer:	None
Preservative:	None
Stabilizer:	None
Reconstitution Volume:	1.0 mL
Reconstitution Buffer:	Restore with deionized water (or equivalent)

Shipping & Handling

Shipping Condition:	Ambient
Storage Condition:	Store vial at 2 - 8 ° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

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