



LKT Laboratories, Inc.

Transactivator of Transcription Peptide (2-4)

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Product Information

Product ID T0077
CAS No.
Chemical Name

Synonym TAT 2-4, TAT peptide, YGRKKRRQRRRGYGRKKRRQRRRG

Formula C₁₃₂H₂₄₀N₆₆O₂₉
Formula Wt. 3215.81
Melting Point
Purity ≥95%
Solubility Soluble in water.

H-Tyr-Gly-Arg-Lys-Lys-Arg-Arg-
Gln-Arg-Arg-Arg-Gly-Tyr-Gly-
Arg-Lys-Lys-Arg-Arg-Gln-Arg-
Arg-Arg-Gly-OH

Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
T0077	0.5 mg	\$94.60
T0077	1 mg	\$161.40
T0077	2.5 mg	\$283.70

Store Temp -20° C
Ship Temp Ambient

Description Transactivator of transcription (TAT) protein is produced by HIV-1 and is involved in the induction of HIV-associated neurologic disorders (HAND). TAT is a neurotoxin that infects neurons, which HIV is unable to do. In neurons, TAT increases the number of inhibitory synapses and decreases the number of excitatory synapses in a Ca²⁺-dependent manner. TAT also activates microglia and other myeloid cells, disrupting cytokine/chemokine homeostasis and inducing neuroinflammation. This peptide sequence (YGRKKRRQRRRGYGRKKRRQRRRG) represents two back-to-back protein transduction (cell-penetrating) domains of TAT.

References Hargus NJ, Thayer SA. Human immunodeficiency virus-1 Tat protein increases the number of inhibitory synapses between hippocampal neurons in culture. *J Neurosci.* 2013 Nov 6;33(45):17908-20. PMID: 24198379.

Bethel-Brown C, Yao H, Callen S, et al. HIV-1 Tat-mediated induction of platelet-derived growth factor in astrocytes: role of early growth response gene 1. *J Immunol.* 2011 Apr 1;186(7):4119-29. PMID: 21368226.

Lu SM, Tremblay MÈ, King IL, et al. HIV-1 Tat-induced microgliosis and synaptic damage via interactions between peripheral and central myeloid cells. *PLoS One.* 2011;6(9):e23915. PMID: 21912650.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.