

Hello Bio, Inc.  
304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500  
F. 609-228-4994

customercare-usa@hellobio.com



## DATASHEET

### TAT-D1 Peptide

#### Product overview

<b>Name</b>	TAT-D1 Peptide
<b>Cat No</b>	HB9975
<b>Biological action</b>	Antagonist
<b>Purity</b>	>95%
<b>Description</b>	Selective D <sub>1</sub> -D <sub>2</sub> heteromer antagonist

#### Biological Data

<b>Biological description</b>	Selective Dopamine D <sub>1</sub> -D <sub>2</sub> heteromer antagonist which occludes the interaction site between the two receptors to inhibit D <sub>1</sub> -D <sub>2</sub> heteromer expression and function. Alleviates behavioural despair symptoms and exerts antidepressant-like effects. Active in vivo.
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#### Solubility & Handling

<b>Storage instructions</b>	-20°C
<b>Solubility overview</b>	Soluble in PBS (1 mg/ml), and in DMSO
<b>Important</b>	This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not for human or veterinary use.

#### Chemical Data

<b>Molecular Weight</b>	3472.97
<b>Molecular Formula</b>	C <sub>144</sub> H <sub>257</sub> N <sub>57</sub> O <sub>43</sub>

#### References

**A peptide targeting an interaction interface disrupts the dopamine D1-D2 receptor heteromer to block signaling and function in vitro and in vivo: effective selective antagonism.**

Hasbi A et al (2014) FASEB journal : official publication of the Federation of American Societies for Experimental Biology 28  
**PubMedID** [25063849](#)

**Modulation and functions of dopamine receptor heteromers in drugs of abuse-induced adaptations.**

Andrianarivelo A et al (2019) Neuropharmacology 152  
**PubMedID** [30529032](#)

**The dopamine D1-D2 receptor heteromer exerts a tonic inhibitory effect on the expression of amphetamine-induced locomotor sensitization.**

Shen MY et al (2015) Pharmacology, biochemistry, and behavior 128  
**PubMedID** [25444866](#)

**Effects of Mitochondrial-Derived Peptides (MDPs) on Mitochondrial and Cellular Health in AMD.**

Nashine S et al (2020) Cells 9

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[32365540](#)

**Mitochondria-derived peptide SHLP2 regulates energy homeostasis through the activation of hypothalamic neurons.**

Kim SK et al (2023) Nature communications 14

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