



LKT Laboratories, Inc.

Tyr-W-MIF-1

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## Product Information

Product ID M3220

CAS No. 144450-13-5

**Chemical Name**

H-Tyr-Pro-Trp-Gly-NH<sub>2</sub>

**Synonym** (Tyr0, Trp2)-Melanocyte-stimulating hormone-release inhibiting factor

**Formula** C<sub>27</sub>H<sub>32</sub>N<sub>6</sub>O<sub>5</sub>

**Formula Wt.** 520.59

**Melting Point**

**Purity** ≥95%

**Solubility** Soluble in water.

**Bulk quantities available upon request**

Product ID	Size
M3220	5 mg
M3220	10 mg
M3220	25 mg

**Store Temp** -20° C

**Ship Temp** Ambient

**Description** Tyr-W-MIF-1 is a neuromodulatory peptide of the MIF-1 family that acts as an antagonist at μ<sub>2</sub>-opioid receptors (μORs). When given alone, Tyr-W-MIF-1 induces mixed, dose-dependent effects on μORs; Tyr-W-MIF-1 inhibits the analgesic and antinociceptive activities of opioids when co-administered. This peptide inhibits stress-induced secretion of adrenocorticotrophic hormone (ACTH) and corticosterone. Tyr-W-MIF-1 may also modulate reward processing through its activities at opioid receptors, as it induces conditioned place preference in animal models when delivered alone.

**References** Mizoguchi H, Takagi H, Watanabe C, et al. Involvement of multiple μ-opioid receptor subtypes on the presynaptic or postsynaptic inhibition of spinal pain transmission. *Peptides*. 2013 Oct 25. pii: S0196-9781(13)00344-6. PMID: 24512946.

Bocheva A, Dzambazova E, Hadjiolova R, et al. Effect of Tyr-MIF-1 peptides on blood ACTH and corticosterone concentration induced by three experimental models of stress. *Auton Autacoid Pharmacol*. 2008 Oct;28(4):117-23. PMID: 18798907.

Bocheva A, Dzambazova-Maximova E. Antioioid properties of the TYR-MIF-1 family. *Methods Find Exp Clin Pharmacol*. 2004 Nov;26(9):673-7. PMID: 15632952.

Nores WL, Olson RD, Olson GA, et al. Tyr-W-MIF-1-induced conditioned place preference. *Peptides*. 1999;20(4):479-84. PMID: 10458518.

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