

PRODUCT INFORMATION



Orexin B amide (human) (trifluoroacetate salt)

Item No. 24765

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| Formal Name: | L-arginyl-L-serylglycyl-L-prolyl-L-prolylglycyl-L-leucyl-L-glutaminyglycyl-L-arginyl-L-leucyl-L-glutaminy-L-arginyl-L-leucyl-L-leucyl-L-glutaminy-L-alanyl-L-serylglycyl-L-asparaginy-L-histidyl-L-alanyl-L-alanylglycyl-L-isoleucyl-L-leucyl-L-threonyl-L-methioninamide, trifluoroacetate salt | H—Arg—Ser—Gly—Pro—Pro—Gly—Leu—Gln—Gly—Arg—Leu—Gln—Arg—Leu—Leu—Gln—Ala—Ser—Gly—Asn—His—Ala—Ala—Gly—Ile—Leu—Thr—Met—NH ₂ |
| Synonyms: | Hypocretin 2, OXB | |
| MF: | C ₁₂₃ H ₂₁₂ N ₄₄ O ₃₅ S • XCF ₃ COOH | |
| FW: | 2,899.3 | • XCF ₃ COOH |
| Purity: | ≥95% | |
| Supplied as: | A lyophilized powder | |
| Storage: | -20°C | |
| Stability: | ≥4 years | |

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Orexin B amide (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the orexin B amide (human) (trifluoroacetate salt) in water. The solubility of orexin B amide (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Orexin B amide is a hypothalamic neuropeptide that regulates feeding behavior, wakefulness, and behavior under situations of high motivational relevance.¹ It is an agonist of orexin (OX) receptors with IC₅₀ values of 420 and 36 nM for human recombinant OX₁ and OX₂ receptors, respectively, expressed in CHO cells.² It induces transient increases in intracellular calcium in CHO cells stably expressing OX₁ and OX₂ (EC₅₀s = 2,500 and 60 nM, respectively) and in primary rat ventral tegmental area (VTA) dopaminergic neurons.^{2,3} Orexin B amide stimulates arachidonic acid (Item No. 90010) release from CHO cells expressing human recombinant OX₁ (EC₅₀ = 4.17 nM).⁴ It also stimulates food intake in freely feeding mice and goldfish when administered at intracerebroventricular doses of 30 nmol and 10 ng/g, respectively.^{2,5}

References

1. Mahler, S.V., Moorman, D.E., Smith, R.J., *et al.* Motivational activation: A unifying hypothesis of orexin/hypocretin function. *Nat. Neurosci.* **17(10)**, 1298-1303 (2014).
2. Sakurai, T., Amemiya, A., Ishii, M., *et al.* Orexins and orexin receptors: A family of hypothalamic neuropeptides and G protein-coupled receptors that regulate feeding behavior. *Cell* **92(4)**, 573-585 (1998).
3. Nakamura, T., Uramura, K., Nambu, T., *et al.* Orexin-induced hyperlocomotion and stereotypy are mediated by the dopaminergic system. *Brain Res.* **873(1)**, 181-187 (2000).
4. Turunen, P.M., Ekholm, M.E., Somerharju, P., *et al.* Arachidonic acid release mediated by OX₁ orexin receptors. *Br. J. Pharmacol.* **159(1)**, 212-221 (2010).
5. Volkoff, H., Bjorklund, J.M., and Peter, R.E. Stimulation of feeding behavior and food consumption in the goldfish, *Carassius auratus*, by orexin-A and orexin-B. *Brain Res.* **846(2)**, 204-209 (1999).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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