

Orexin B, rat, mouse

Chemical Properties

CAS No.:	202801-92-1
Formula:	C ₁₂ H ₂₁ N ₄ O ₃ S
Molecular Weight:	2936.4
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Orexin B, rat, mouse is an endogenous agonist at Orexin receptor with K _i s of 420 and 36 nM for OX1 and OX2, respectively.
In vitro	Orexin B is derived by proteolytic amino acid precursor, prepro-orexin, which is encoded by a gene localized to chromosome 17q21 in humans. In radioligand binding studies, Orexin B has a higher affinity for the OX2 receptor[1]. Human Orexin B has two amino acid substitutions when compared with the rodent sequence. OX2 receptor is indeed a high-affinity receptor for human orexin B, with an IC ₅₀ of 36 nM in the binding assay and an EC ₅₀ of 60 nM in the [Ca ²⁺] _i transient assay. Human Orexin B has significantly lower affinity for the human OX1: the calculated IC ₅₀ in the competitive binding assay and the EC ₅₀ in the [Ca ²⁺] _i transient assay are 420 nM and 2500 nM for human orexin-B, respectively[2].
In vivo	Human Orexin B significantly augments food intake; at the 2 hr time point, 5- and 12-fold stimulation of food consumption is observed by 3 nM and 30 nM orexin-B, respectively[2].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.341 mL	1.703 mL	3.406 mL
5 mM	0.068 mL	0.341 mL	0.681 mL
10 mM	0.034 mL	0.17 mL	0.341 mL
50 mM	0.007 mL	0.034 mL	0.068 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Smart D, et al. Orexins: a new family of neuropeptides. Br J Anaesth. 1999 Nov;83(5):695-7.

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