

Data Sheet

Product Name:	Orexin B, human (TFA)
Cat. No.:	CS-0096896
Molecular Formula:	C123H212N44O35S.C2HF3O2
Molecular Weight:	3013.36
Target:	Orexin Receptor (OX Receptor)
Pathway:	GPCR/G Protein; Neuronal Signaling
Solubility:	H2O

RSGPPGLQGRLQRLQASGNHAAGILTM-NH₂



BIOLOGICAL ACTIVITY:

Orexin B, human (TFA) is an endogenous agonist at **Orexin** receptor with K_i s of 420 and 36 nM for OX1 and OX2, respectively. IC₅₀ & Target: K_i : 420 nM (OX1), 36 nM (OX2)^[1]. **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 IC₅₀ of 36 nM in the binding assay and an EC₅₀ of 60 nM in the [Ca²⁺]_i transient assay. Human Orexin B has significantly lower affinity for the human OX1: the calculated IC₅₀ in the competitive binding assay and the EC₅₀ in the [Ca²⁺]_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].

References:

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

[2]. Sakurai T, et al. Orexins and orexin receptors: a family of hypothalamic neuropeptides and G protein-coupled receptors that regulate feeding behavior. Cell. 1998 Feb 20;92(4):573-85.

CAIndexNames:

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SMILES:

O=C(O)C(F)(F)F.[RSGPPGLQGRLQRLQASGNHAAGILTM-NH₂]

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA