

Data Sheet

Product Name:	Orexin A (human, rat, mouse)
Cat. No.:	CS-0025344
CAS No.:	205640-90-0
Molecular Formula:	C152H243N47O44S4
Molecular Weight:	3561.10
Target:	Orexin Receptor (OX Receptor)
Pathway:	GPCR/G Protein; Neuronal Signaling
Solubility:	H2O

XPLPDCCRQKTCSCRLYELLHGAGNHAAGILTL cyclic (6-12),(7-14)-bis(disulfide)

BIOLOGICAL ACTIVITY:

Orexin A human, rat, mouse, a 33 amino acid excitatory neuropeptide, orchestrates diverse central and peripheral processes. Orexin A human, rat, mouse is a specific, high-affinity agonist for G-protein-coupled receptor **OX1R**. Orexin A human, rat, mouse has a role in the regulation of feeding behavior. Orexin A human, rat, mouse is an effective anti-nociceptive and anti-hyperalgesic agent in mice and rats^{[1][2]}. **In Vitro:** Orexin A human, rat, mouse has high affinity for OX1R, with 38 nM IC₅₀ and 34 nM EC₅₀ values in the the [Ca²⁺]_i transient assay^[1]. **In Vivo:** Orexin A human, rat, mouse (3-30 mg/kg; i.v.; 5 min pre-test) significantly increases the latency to response at 10 and 30 mg/kg i.v. when given 5 min pre-test from 24.8±2.0 s in vehicle-treated mice to 35.0±3.7 s and 45.7±4.5 s, respectively^[2].

Orexin A human, rat, mouse (3, 10 and 30 mg/kg; i.v.) was given immediately before phenylp-quinone (PPQ) and increases the latency to the first PPQ-induced constriction from 357.4±35.2 s in vehicle-treated mice to 500.3±31.2 s at 10 mg/kg and 594.5±5.5 s at 30 mg/kg^[2].

References:

[1]. 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.

[2]. Bingham S, et al. Orexin-A, an hypothalamic peptide with analgesic properties. Pain. 2001 May;92(1-2):81-90.

CAIndexNames:

L-Leucinamide, 5-oxo-L-prolyl-L-prolyl-L-leucyl-L-prolyl-L-α-aspartyl-L-cysteinyl-L-cysteinyl-L-arginyl-L-glutamyl-L-lysyl-L-threonyl-L-cysteinyl-L-seryl-L-cysteinyl-L-arginyl-L-leucyl-L-tyrosyl-L-α-glutamyl-L-leucyl-L-leucyl-L-histidylglycyl-L-alanylglycyl-L-asparagyl-L-histidyl-L-alanyl-L-alanylglycyl-L-isoleucyl-L-leucyl-L-threonyl-, cyclic (6→12),(7→14)-bis(disulfide)

SMILES:

[XPLPDCCRQKTCSCRLYELLHGAGNHAAGILTL cyclic (6-12),(7-14)-bis(disulfide)]

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

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