

# PRODUCT INFORMATION

## Orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt)

Item No. 15073

CAS Registry No.: 205640-90-0

**Formal Name:** 5-oxo-L-prolyl-L-prolyl-L-leucyl-L-prolyl-L- $\alpha$ -aspartyl-L-cysteinyl-L-cysteinyl-L-arginyl-L-glutaminyl-L-lysyl-L-threonyl-L-cysteinyl-L-seryl-L-cysteinyl-L-arginyl-L-leucyl-L-tyrosyl-L- $\alpha$ -glutamyl-L-leucyl-L-leucyl-L-histidylglycyl-L-alanyl-glycyl-L-asparaginyl-L-histidyl-L-alanyl-L-alanyl-glycyl-L-iso-leucyl-L-leucyl-L-threonyl-L-leucinamide, cyclic (6 $\rightarrow$ 12),(7 $\rightarrow$ 14)-bis(disulfide), trifluoroacetate salt

**Peptide Sequence:** XPLPDCCRQKTCSCRLYELLHGAGNHAAGILT-NH<sub>2</sub>  
(Modifications: X = Glp, Disulfide bridge between 6-12, 7-14, Leu-33 = C-terminal amide)

**MF:** C<sub>152</sub>H<sub>243</sub>N<sub>47</sub>O<sub>44</sub>S<sub>4</sub> • XCF<sub>3</sub>COOH

**Synonyms:** Hypocretin 1, Orexin A

**FW:** 3,561.1

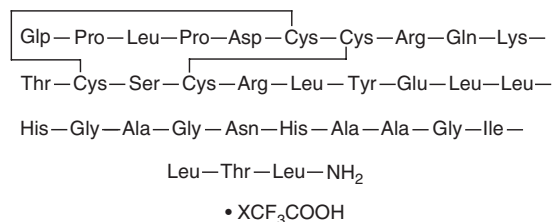
**Purity:**  $\geq$ 95%

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:**  $\geq$ 4 years

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



### Laboratory Procedures

Orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) in the solvent of choice. Orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) is soluble in organic solvents such as DMSO, which should be purged with an inert gas. The solubility of orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) in these solvents is approximately 3 mg/ml.

Orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Orexin A amide (bovine, human, mouse, rat) (trifluoroacetate salt) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Orexin A is a 33 amino acid hypothalamic neuropeptide with a role in appetite regulation, wakefulness, locomotor activity, hypothalamic-pituitary-adrenal activity, and pain thresholds.<sup>1</sup> Orexin signaling is activated by nutrient depletion, causing an increase in food intake by delaying the signals of satiety.<sup>2</sup> It activates the orexin-1 and -2 receptors with equal affinity (EC<sub>50</sub>s = 0.09 and 0.06  $\mu$ M, respectively).<sup>3</sup>

### References

1. Rodgers, R.J., Ishii, Y., Halford, J.C.G., *et al.* Orexins and appetite regulation. *Neuropeptides* **36**(5), 303-325 (2002).
2. Schwartz, M.W. Orexins and appetite: The big picture of energy homeostasis gets a little bigger. *Nat. Med.* **4**, 385-386 (1998).
3. Lang, M., Söll, R.M., Dürrenberger, F., *et al.* Structure-activity studies of orexin A and orexin B at the human orexin 1 and orexin 2 receptors led to orexin 2 receptor selective and orexin 1 receptor preferring ligands. *J. Med. Chem.* **47**(5), 1153-1160 (2004).

#### 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.

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