

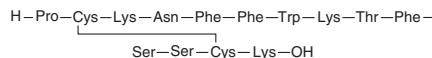
# PRODUCT INFORMATION



## Cortistatin-14 (trifluoroacetate salt)

Item No. 25074

**Formal Name:** L-prolyl-L-cysteinyl-L-lysyl-L-asparaginyl-L-phenylalanyl-L-phenylalanyl-L-tryptophyl-L-lysyl-L-threonyl-L-phenylalanyl-L-seryl-L-seryl-L-cysteinyl-L-lysine, cyclic (2→13)-disulfide, trifluoroacetate salt



**MF:** C<sub>81</sub>H<sub>113</sub>N<sub>19</sub>O<sub>19</sub>S<sub>2</sub> • XCF<sub>3</sub>COOH

**FW:** 1,721.0

**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

Cortistatin-14 (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the cortistatin-14 (trifluoroacetate salt) in water. The solubility of cortistatin-14 (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Cortistatin-14 is an endogenous neuropeptide agonist of somatostatin receptors (IC<sub>50</sub>s = 0.5-18.2 nM for human SST<sub>1</sub>-SST<sub>5</sub> receptors expressed in CCL39 cells).<sup>1,2</sup> It is expressed in GABAergic interneurons in the cortex and hippocampus.<sup>2,3</sup> Cortistatin-14 competitively inhibits hexarelin binding to human growth hormone secretagogue receptors (GHS-R) in pituitary membranes (K<sub>i</sub> = 0.54 μM).<sup>4</sup> It also activates the human Mas-related gene receptor MrgX2 expressed in HEK293 cells leading to quantifiable GTP-γS binding to the G protein subunit Gα<sub>o</sub> (EC<sub>50</sub> = 1.3 μM).<sup>5</sup> Cortistatin-14 (0.01-1 μM), similarly to somatostatin-14 (Item No. 20809), completely inhibits thyrotropin-releasing hormone (TRH; Item No. 22917), and partially inhibits vasoactive intestinal peptide (VIP; Item No. 24996), stimulation of cAMP production in GH<sub>4</sub> cells.<sup>3</sup> In mice, cortistatin-14 dose-dependently (0.05-5 μg, i.c.v.) impairs memory retention when administered after foot shock avoidance training.<sup>6</sup> Cortistatin-14 (40-320 μg/kg, s.c.) dose-dependently reduces growth hormone secretion in rats by greater than 80% after 10 minutes when administered at doses of 40-320 μg/kg.<sup>7</sup>

### References

1. Criado, J.R., Li, H., Jiang, X., et al. *J. Neurosci. Res.* **56(6)**, 611-619 (1999).
2. Spier, A.D. and de Lecea, L. *Brain Res. Brain Res. Rev.* **33(2-3)**, 228-241 (2000).
3. de Lecea, L., Criado, J.R., Prospero-Garcia, O., et al. *Nature* **381(6579)**, 242-245 (1996).
4. Deghenghi, R., Papotti, M., Ghigo, E., et al. *J. Endocrinol. Invest.* **24(1)**, RC1-RC3 (2001).
5. Burstein, E.S., Ott, T.R., Feddock, M., et al. *Br. J. Pharmacol.* **147(1)**, 73-82 (2006).
6. Flood, J.F., Uezu, K., and Morley, J.E. *Brain Res.* **775(1-2)**, 250-252 (1997).
7. Deghenghi, R., Avallone, R., Torsello, A., et al. *J. Endocrinol. Invest.* **24(11)**, RC31-RC33 (2001).

#### 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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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM