

# PRODUCT INFORMATION



## Somatostatin-14 (human, mouse, rat, porcine, bovine, ovine) (acetate) Item No. 20809

CAS Registry No.: 54472-66-1

Formal Name: somatostatin, monoacetate

MF:  $C_{76}H_{104}N_{18}O_{19}S_2 \cdot C_2H_4O_2$

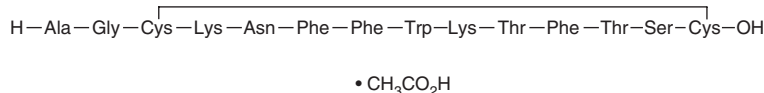
FW: 1,697.9

Purity:  $\geq 98\%$

Supplied as: A powder

Storage:  $-20^\circ\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

Somatostatin-14 (human, mouse, rat, porcine, bovine, ovine) (acetate) is supplied as a powder. A stock solution may be made by dissolving the somatostatin-14 (human, mouse, rat, porcine, bovine, ovine) (acetate) in water. The solubility of somatostatin-14 (human, mouse, rat, porcine, bovine, ovine) (acetate) in water is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Somatostatin-14 is a natural cyclic peptide hormone derived from the preprohormone, somatostatin.<sup>1</sup> It is a somatostatin (SST) receptor agonist that binds to SST<sub>1</sub>, SST<sub>2</sub>, SST<sub>3</sub>, SST<sub>4</sub>, and SST<sub>5</sub> (IC<sub>50</sub>s = 0.22, 0.10, 0.28, 1.23, and 0.30 nM, respectively, in CCL39 cells expressing human recombinant receptors).<sup>2</sup> It inhibits cAMP accumulation induced by forskolin (Item No. 11018) in CCL39 cells expressing human recombinant SST<sub>1</sub>, SST<sub>2</sub>, SST<sub>3</sub>, SST<sub>4</sub>, and SST<sub>5</sub> (EC<sub>50</sub>s = 6.16, 4.37, 17.38, 2.95, and 4.67 nM, respectively).<sup>3</sup> Somatostatin-14 inhibits the release of growth hormone, prolactin, thyrotropin, glucagon, and insulin, as well as other signaling molecules.<sup>1,4,5</sup>

### References

1. Hadjidakis, D.J., Raptis, S.A., Souvatzoglou, A., *et al.* Differences between somatostatin-28 and somatostatin-14 with respect to their biological effects in healthy humans and acromegalics. *Clin. Physiol. Biochem.* **4(6)**, 372-383 (1986).
2. Siehler, S., Seuwen, K., and Hoyer, D. Characterisation of human recombinant somatostatin receptors. 1. Radioligand binding studies. *Naunyn Schmiedebergs Arch. Pharmacol.* **360(5)**, 488-499 (1999).
3. Siehler, S. and Hoyer, D. Characterisation of human recombinant somatostatin receptors. 3. Modulation of adenylate cyclase activity. *Naunyn Schmiedebergs Arch. Pharmacol.* **360(5)**, 510-521 (1999).
4. Gillies, G. Somatostatin: The neuroendocrine story. *Trends Pharmacol. Sci.* **18(3)**, 87-95 (1997).
5. Joseph, I.M.P., Zavros, Y., Merchant, J.L., *et al.* A model for integrative study of human gastric acid secretion. *J. Appl. Physiol.* **94(4)**, 1602-1618 (2003).

#### 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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