



## Product Information

Product ID S5752

CAS No. 81286-16-0

Chemical Name

Synonym

Formula  $C_{49}H_{81}N_{17}O_{19}S$

Formula Wt. 1244.36

Melting Point

Purity  $\geq 95\%$

Solubility

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** Somatostatin is an endogenous neuropeptide hormone found in the brain and pancreas. Somatostatin binds several isoforms of the somatostatin receptor, exhibiting anxiolytic, antiepileptic/anticonvulsant, and anorexigenic activities. In vivo, somatostatin improves performance in the light/dark avoidance test. Somatostatin also suppresses seizures and prevents the generation of seizures, potentially through modulation of GABA signaling. Somatostatin induces cell death under hypoxic/ischemic conditions. In tumor cells, somatostatin displays pro-apoptotic properties, potentially involving the inhibition of PI3K/Akt signaling. Somatostatin also limits food intake and inhibits secretion of insulin and glucagon through alteration of G $\beta$  signaling and P/Q-type N-type, and L-type voltage-gated Ca $^{2+}$  channel signaling.

H-Ser-Ala-Asn-Ser-Asn-Pro-Ala-Met-Ala-Pro-Arg-Glu-OH

**Bulk quantities available upon request**

Product ID	Size
S5752	1 mg
S5752	2 mg
S5752	5 mg

**References** Stumm R. Somatostatin receptor sst2 reduces Akt activity and aggravates hypoxic/ischemic death in cerebral cortical neurons. *Neuropharmacology*. 2014 Feb;77:249-56. PMID: 24157493.

Takahashi M, Takeda M, Matsumoto S. Somatostatin enhances tooth-pulp-evoked cervical dorsal horn neuronal activity in the rat via inhibition of GABAergic interneurons. *Brain Res Bull*. 2014 Jan;100:76-83. PMID: 24321530.

Albrecht A, Thiere M, Bergado-Acosta JR, et al. Circadian modulation of anxiety: a role for somatostatin in the amygdala. *PLoS One*. 2013 Dec 20;8(12):e84668. PMID: 24376834.

Kovac S, Walker MC. Neuropeptides in epilepsy. *Neuropeptides*. 2013 Dec;47(6):467-75. PMID: 24210141.

Begg DP, Woods SC. Interactions between the central nervous system and pancreatic islet secretions: a historical perspective. *Adv Physiol Educ*. 2013 Mar;37(1):53-60. PMID: 23471249.

Schwetz TA, Ustione A, Piston DW. Neuropeptide Y and somatostatin inhibit insulin secretion through different mechanisms. *Am J Physiol Endocrinol Metab*. 2013 Jan 15;304(2):E211-21. PMID: 23211512.

Kailey B, van de Bunt M, Cheley S, et al. SSTR2 is the functionally dominant somatostatin receptor in human pancreatic  $\beta$ - and  $\alpha$ -cells. *Am J Physiol Endocrinol Metab*. 2012 Nov 1;303(9):E1107-16. PMID: 22932785.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.