ALPHA DIAGNOSTIC INTERNATIONAL

Product Data Sheet

Cat# **SP-52221-1**

Description: Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-THr-Phe-Thr-Ser-Cys-OH (Disulfide Bridge Cys3-Csy14); MW: 1637.9]

Size: 5 mg

Purity: >95%

Store: Desiccated at -20oC.

Somatostatin, also known as growth hormone–inhibiting hormone (GHIH), is a peptide hormone that regulates the endocrine system and affects neurotransmission and cell proliferation via interaction with G protein-coupled somatostatin receptors and inhibition of the release of numerous secondary hormones. Somatostatin inhibits insulin and glucagon secretion.

Somatostatin has two active forms produced by alternative cleavage of a single preproprotein: one is 14 amino acids, the other of 28 amino acids which is the short form with another 14 amino acids at one end.

Among the vertebrates, there exist six different somatostatin genes that have been named SS1, SS2, SS3, SS4, SS5, and SS6. Zebrafish have all 6. The six different genes along with the five different somatostatin receptors allows somatostatin to possess a large range of functions. Humans have only one somatostatin gene, SST.

Somatostatin is also known as:

growth hormone–inhibiting hormone (GHIH)
growth hormone release–inhibiting hormone (GHRIH)
somatotropin release–inhibiting factor (SRIF)
somatotropin release–inhibiting hormone (SRIH)

Somatostatin is secreted at several locations in the digestive system:

Delta cells in the pyloric antrum, the duodenum and the pancreatic islets
Somatostatin released in the pyloric antrum travels via the portal venous system to the heart, then enters the systemic circulation to reach the locations where it will exert its inhibitory effects. In addition, somatostatin released from delta cells can act in a paracrine manner.

In the stomach, somatostatin acts directly on the acid-producing parietal cells via a G-protein coupled receptor (which inhibits adenylate cyclase, thus effectively antagonising the stimulatory effect of histamine) to reduce acid secretion. Somatostatin can also indirectly decrease stomach acid production by preventing the release of other hormones, including gastrin, secretin and histamine which effectively slows down the digestive process.

References:
Liu Y, (2010) Gene **463** (1–2): 21–28; Gahete MD, (2010) Annals of the New York Academy of Sciences 1200: 43–52; Shen LP (April 1984) Science **224** (4645): 168–71.

This product is for in vitro research use only.

Related Material available for ADI

Catalog# Prod Description

SP-89822-5 "[Des-Ala1,des-Gly2,His4,5,D-Trp8]-Somatostatin-14 [Cys-His-His-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bridge:Cys1-Cys12); MW: 1541.79]"

SP-89825-1 [D-Ser13]-Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-D-Ser-Cys (Disulfide bridge:Cys3-Cys14); MW: 1637.91]

SP-89827-1 [D-Trp8,D-Cys14]-Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Ser-D-Cys ; MW: 1637.91

SP-89829-1 [Tyr11]-Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Tyr-Thr-Ser-Cys (Disulfide bridge: Cys3-Cys14); MW 1653.91]

SP-89826-1 [D-Trp8]-Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-D-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bridge:Cys3-Cys14); MW: 1637.91]

SP-89823-1 "[D-Phe7]-Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-D-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bridge:Cys3-Cys14); MW: 1637.91]"

SP-89828-1 Tyr-Somatostatin-14 (AA: Tyr-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bridge: Cys4-Cys15)) (MW: 1801.09)

SP-52221-1 Somatostatin-14 [Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-THr-Phe-Thr-Ser-Cys-OH (Disulfide Bridge Cys3-Csy14); MW: 1637.9]

SP-89830-5 Somatostatin-14 (2-9) (AA: Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys) (MW: 1028.23)

SP-89831-5 Somatostatin-14 (3-10) (AA: Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr) (MW: 1073.28)

SP-89820-1 Somatostatin-14 (reduced) (AA: Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys) (MW: 1639.91)

SP-89832-1 Somatostatin-14 (3-14) (AA: Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bond)) (MW: 1509.78)

SP-89833-5 Somatostatin-14 (7-14) (AA: Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys) (MW: 1019.19)

SP-89821-1 "Biotin-Somatostatin-14 (AA: Biotin-Ala-Gly-Cys-Lys-Asn-Phe-Phe-Trp-Lys-Thr-Phe-Thr-Ser-Cys (Disulfide bridge:Cys3-Cys14)) (MW: 1864.21)"

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