

PRODUCT INFORMATION



Linacotide

Item No. 24085

CAS Registry No.: 851199-59-2
Formal Name: L-cysteinyl-L-cysteinyl-L- α -glutamyl-L-tyrosyl-L-cysteinyl-L-cysteinyl-L-asparaginyl-L-prolyl-L-alanyl-L-cysteinyl-L-threonylglycyl-L-cysteinyl-L-tyrosine, cyclic (1 \rightarrow 6),(2 \rightarrow 10),(5 \rightarrow 13)-tris(disulfide)

MF: C₅₉H₇₉N₁₅O₂₁S₆

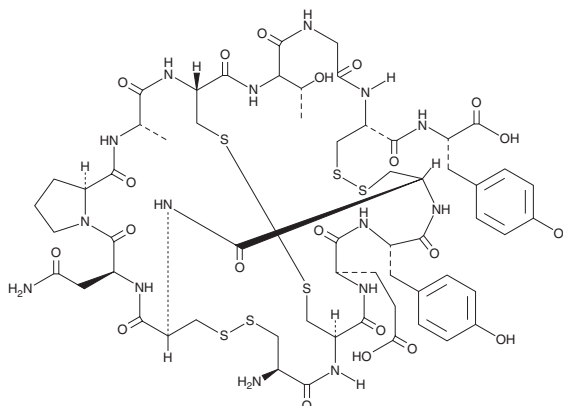
FW: 1,526.7

Purity: \geq 95%

Supplied as: A 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

Linacotide is supplied as a solid. A stock solution may be made by dissolving the linacotide in the solvent of choice, which should be purged with an inert gas. Linacotide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of linacotide in these solvents is approximately 30 mg/ml.

Linacotide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, linacotide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Linacotide has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Linacotide is a peptide agonist of the guanylate cyclase C receptor ($K_i = 16.4$ nM in a radioligand binding assay using mouse intestinal mucosa).¹ Luminal exposure to 5 μ g of linacotide stimulates fluid secretion and cGMP concentration in jejunal loops isolated from wild-type mice but not guanylate cyclase C receptor-null mice. Linacotide (100 μ g/kg) increases intestinal transit rate in wild-type mice. It also reduces the number of phosphorylated ERK-positive dorsal horn neurons in the thoracolumbar spinal cord, a marker of nociceptive signaling, following noxious colorectal distension and mechanical hypersensitivity in a mouse model of TNBS-induced colitis.² Formulations containing linacotide have been used for the treatment of constipation and pain associated with irritable bowel syndrome.

References

1. Bryant, A.P., Busby, R.W., Bartolini, W.P., *et al.* Linacotide is a potent and selective guanylate cyclase C agonist that elicits pharmacological effects locally in the gastrointestinal tract. *Life Sci.* **86**(19-20), 760-765 (2010).
2. Castro, J., Harrington, A.M., Hughes, P.A., *et al.* Linacotide inhibits colonic nociceptors and relieves abdominal pain via guanylate cyclase-C and extracellular cyclic guanosine 3',5'-monophosphate. *Gastroenterology* **145**(6), 1334-1346 (2013).

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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