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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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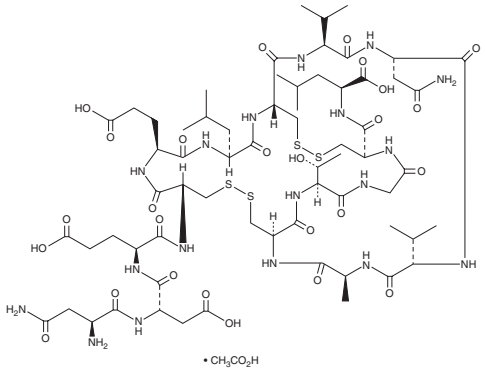
PRODUCT INFORMATION

Plecanatide (acetate)

Item No. 33878

Formal Name:	L-asparaginyl-L-α-aspartyl-L-α-glutamyl-L-cysteinyl-L-α-glutamyl-L-leucyl-L-cysteinyl-L-valyl-L-asparaginyl-L-valyl-L-alanyl-L-cysteinyl-L-threonylglycyl-L-cysteinyl-L-leucine, cyclic (4→12),(7→15)-*bis*(disulfide), monoacetate
Synonym:	SP-304
MF:	$C_{65}H_{104}N_{18}O_{26}S_4 \bullet C_2H_4O_2$
FW:	1,741.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 259 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Plecanatide (acetate) is supplied as a solid. A stock solution may be made by dissolving the plecanatide (acetate) in the solvent of choice, which should be purged with an inert gas. Plecanatide (acetate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of plecanatide (acetate) in these solvents is approximately 3 and 1 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of plecanatide (acetate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of plecanatide (acetate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Plecanatide is a peptide agonist of the guanylate cyclase C receptor.[1] It stimulates cGMP production in T84 colon cancer cells (EC_{50} = 170 nM). Plecanatide (10 ppm in the diet) reduces increases in the number of neoplastic colon epithelial cells expressing Ki-67, a marker of cell proliferation, induced by dextran sulfate (DSS; Item No. 23250) in cancer-prone $Apc^{+/Min\text{-}FCCC}$ mice.[2] It suppresses trinitrobenzenesulfonic acid-induced increases in abdominal contractions in a rat model of visceral hypersensitivity when administered at doses of 0.01 and 0.05 mg/kg.[3] Formulations containing plecanatide have been used in the treatment of chronic idiopathic constipation.

References

1. Shailubhai, K., Palejwala, V., Arjunan, K.P., *et al.* Plecanatide and dolcanatide, novel guanylate cyclase-C agonists, ameliorate gastrointestinal inflammation in experimental models of murine colitis. *World J. Gastrointest. Pharmacol. Ther.* **6(4)**, 213-222 (2015).
2. Chang, W.-C.L., Masih, S., Thadi, A., *et al.* Plecanatide-mediated activation of guanylate cyclase-C suppresses inflammation-induced colorectal carcinogenesis in $Apc^{+/Min\text{-}FCCC}$ mice. *World J. Gastrointest. Pharmacol. Ther.* **8(1)**, 47-59 (2017).
3. Boulete, I.-M., Thai, A., Beaufrand, C., *et al.* Oral treatment with plecanatide or dolcanatide attenuates visceral hypersensitivity via activation of guanylate cyclase-C in rat models. *World J. Gastroenterol.* **24(17)**, 1888-1900 (2018).

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