PRODUCT INFORMATION

Motilin (porcine)

Item No. 21619

CAS Registry No.: 9072-41-7
Formal Name: motilin (swine)
MF: $C_{120}H_{188}N_{34}O_{35}S$
FW: 2,699.1
Purity: ≥95%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years

H—Phe—Val—Pro—Ile—Phe—Thr—Tyr—Gly—Glu—Leu—Gln—
Arg—Met—Gln—Glu—Lys—Glu—Arg—Asn—Lys—Gly—Gln—OH

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

Laboratory Procedures

Motilin (porcine) is supplied as a crystalline solid. A stock solution may be made by dissolving the motilin (porcine) in the solvent of choice, which should be purged with an inert gas. Motilin (porcine) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of motilin (porcine) in these solvents is approximately 25 mg/ml. Motilin (porcine) is also slightly soluble in ethanol.

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 motilin (porcine) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of motilin (porcine) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Motilin is a polypeptide hormone that stimulates gastric motility through release in the small intestine and into the general circulation during fasting.[1] In isolated rabbit duodenal segments, porcine motilin (10 nM-1 µM) induced phasic contractions and acetylcholine release from enteric neurons (EC_{50} = 2.5 nM).[2] Formulations containing motilin are used to increase gastrointestinal motility in patients with diabetic gastroparesis, often in combination with erythromycin (Item No. 17191), an antibiotic and agonist at the motilin receptor.[1]

References

1. Poitras, P. and Peeters, T.L. Motilin. *Curr. Opin. Endocrinol. Diabetes Obes.* **15(1)**, 54-57 (2008).
2. Kitazawa, T., Ishii, A., and Taniyama, K. The Leu[13]-motilin (KW-5139)-evoked release of acetylcholine from enteric neurones in the rabbit duodenum. *Br. J. Pharmacol.* **109(1)**, 94-99 (1993).

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