PRODUCT INFORMATION

Gastrin I (human)

Item No. 24457

CAS Registry No.: 10047-33-3
Formal Name: 5-oxo-L-prolylglycyl-L-prolyl-L-tryptophyl-L-leucyl-L-α-glutamyl-L-α-glutamyl-L-α-glutamyl-L-α-glutamyl-L-α-glutamyl-L-alanyl-L-tyrosylglycyl-L-tryptophyl-L-methionyl-L-α-aspartyl-L-phenylalaninamide
Synonyms: Gastrin I (1-17) (human), Gastrin Heptadecapeptide I (human)
MF: $C_{97}H_{124}N_{20}O_{31}S$
FW: 2,098.2
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years

H–Glp–Gly–Pro–Trp–Leu–Glu–Glu–Glu–Glu–Glu–Ala–Tyr–Gly–Trp–Met–Asp–Phe–NH_2

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

Laboratory Procedures

Gastrin I (human) is supplied as a lyophilized powder. Aqueous solutions of Gastrin I (human) can be prepared by directly dissolving the lyophilized powder in aqueous buffers. Gastrin I (human) is soluble in a 1% aqueous ammonia solution at a concentration of approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gastrin I is an endogenous, gastrointestinal peptide hormone that binds to cholecystokinin (CCK) receptors on human gastric leiomyosarcoma cells (IC_{50} = 0.9 nM) and in guinea pig gallbladder and pancreatic tissue (IC_{50}s = 1.7 and 2.5 µM, respectively).[1,2] It increases levels of cytosolic calcium in isolated rabbit stomach parietal cells (EC_{50} = 11 nM) and stimulates pepsinogen secretion by isolated human peptic cells (ED_{50} = 30 nM).[3,4] Gastrin I increases histidine decarboxylase (HDC) activity *ex vivo* in fundic stomach mucosa homogenate and increases gastric acid secretion *in vivo* in rats when administered at a dose of 1 nmol/kg/h.[5]

References

1. Miller, L.J. Characterization of cholecystokinin receptors on human gastric smooth muscle tumors. *Am. J. Physiol.* **247(4 Pt 1)**, G402-G410 (1984).
2. von Schrenck, T., Moran, T.H., Heinz-Erian, P., *et al*. Cholecystokinin receptors on gallbladder muscle and pancreatic acinar cells: A comparative study. *Am. J. Physiol.* **255(4 Pt 1)**, G512-G521 (1988).
3. Letari, O., Mennuni, L., Colombo, S., *et al*. Cytosolic Ca^{2+} evaluation in rabbit parietal cells: A novel method to screen gastrin receptor antagonists. *Eur. J. Pharmacol.* **306(1-3)**, 325-333 (1996).
4. Lanas, A.I., Anderson, J.W., Uemura, N., *et al*. Effects of cholinergic, histaminergic, and peptidergic stimulation on pepsinogen secretion by isolated human peptic cells. *Scand. J. Gastroenterol.* **29(8)**, 678-683 (1994).
5. Kawabata, S., Kanayama, S., Shinomura, Y., *et al*. Effect of cholecystokinin receptor antagonists, MK-329 and L-365,260, on cholecystokinin-induced acid secretion and histidine decarboxylase activity in the rat. *Regul. Pept.* **35(1)**, 1-10 (1991).

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