

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-alanyl-L-tyrosylglycyl-L-tryptophyl-L-methionyl-L- α -aspartyl-L-phenylalaninamide

H—Glp—Gly—Pro—Trp—Leu—Glu—Glu—Glu—Glu—Glu—

Synonyms: Gastrin I (1-17) (human),
Gastrin Heptadecapeptide I (human)

Ala—Tyr—Gly—Trp—Met—Asp—Phe—NH₂

MF: C₉₇H₁₂₄N₂₀O₃₁S

FW: 2,098.2

Purity: $\geq 95\%$

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥ 2 years

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 (IC₅₀ = 0.9 nM) and in guinea pig gallbladder and pancreatic tissue (IC₅₀s = 1.7 and 2.5 μ M, respectively).^{1,2} It increases levels of cytosolic calcium in isolated rabbit stomach parietal cells (EC₅₀ = 11 nM) and stimulates pepsinogen secretion by isolated human peptic cells (ED₅₀ = 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 Ca²⁺ 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).

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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