

PRODUCT INFORMATION



GRP (human) (trifluoroacetate salt)

Item No. 24415

Formal Name:	L-valyl-L-prolyl-L-leucyl-L-prolyl-L-alanylglycylglycylglycyl-L-threonyl-L-valyl-L-leucyl-L-threonyl-L-lysyl-L-methionyl-L-tyrosyl-L-prolyl-L-arginylglycyl-L-asparaginyl-L-histidyl-L-tryptophyl-L-alanyl-L-valylglycyl-L-histidyl-L-leucyl-L-methioninamide, 2,2,2-trifluoroacetate	H—Val—Pro—Leu—Pro—Ala—Gly—Gly—Gly—Thr—Val—Leu—Thr—Lys—Met—Tyr—Pro—Arg—Gly—Asn—His—Trp—Ala—Val—Gly—His—Leu—Met—NH ₂
Synonym:	Gastrin-Releasing Peptide (1-27) (human)	
MF:	C ₁₃₀ H ₂₀₄ N ₃₈ O ₃₁ S ₂ • XCF ₃ COOH	
FW:	2,859.4	• XCF ₃ COOH
Purity:	≥95%	
Supplied as:	A lyophilized powder	
Storage:	-20°C	
Stability:	≥4 years	

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

Laboratory Procedures

GRP (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the GRP (human) (trifluoroacetate salt) in water. The solubility of GRP (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Gastrin-releasing peptide (GRP) is a neuropeptide that stimulates gastrin release.^{1,2} It binds to (K_i = 300 nM) and stimulates amylase secretion in rat pancreatic AR42J cells (EC₅₀ = 0.3 nM).³ GRP increases proliferation of human liver carcinoma HepG2 and MHCC97H cells but does not affect the proliferation of normal HL-7702 liver cells at a concentration of 1 nM.⁴ *In vivo*, GRP (0.35 nmol/kg/h) increases both pancreatic exocrine secretion and pancreatic polypeptide (PP) release in rats.⁵ It dose-dependently stimulates gastrin, pancreatic amylase, lipase, bilirubin, and acid output and induces gallbladder contraction in humans when administered at doses ranging from 1 to 27 pmol/kg per hour.²

References

1. Spindel, E.R., Chin, W.W., Price, J., *et al.* Cloning and characterization of cDNAs encoding human gastrin-releasing peptide. *Proc. Natl. Acad. Sci. U.S.A.* **81(18)**, 5699-5703 (1984).
2. Hildebrand, P., Drewe, J., Luo, H., *et al.* Role of cholecystokinin in mediating GRP-stimulated gastric, biliary and pancreatic functions in man. *Regul. Pept.* **41(2)**, 119-129 (1992).
3. Dietrich, J.B., Hildebrand, P., Jeker, L.B., *et al.* Effects of BIM26226, a potent and specific bombesin receptor antagonist, on amylase release and binding of bombesin-like peptides to AR4-2J cells. *Regul. Pept.* **53(3)**, 165-173 (1994).
4. Li, X., Lv, Y., Yuan, A., *et al.* Gastrin-releasing peptide promotes the growth of HepG2 cells via EGFR-independent ERK1/2 activation. *Oncol. Rep.* **24(2)**, 441-448 (2010).
5. Miyasaka, K., Miyazaki, K., Funakoshi, A., *et al.* Effects of synthetic human gastrin-releasing peptide on pancreatic exocrine secretion and release of pancreatic polypeptide in conscious rats. *Int. J. Pancreatol.* **4(3)**, 251-260 (1989).

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.

WARRANTY AND LIMITATION OF REMEDY

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