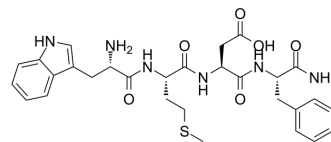


Tetragastrin

Cat. No.:	HY-125556
CAS No.:	1947-37-1
Molecular Formula:	C ₂₉ H ₃₆ N ₆ O ₆ S
Molecular Weight:	596.7
Sequence Shortening:	WMDF-NH2
Target:	Cholecystokinin Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Sealed storage, away from moisture
	Powder -80°C 2 years
	-20°C 1 year



* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro	DMSO : 8.33 mg/mL (13.96 mM); ultrasonic and warming and heat to 80°C				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	1.6759 mL	8.3794 mL	16.7588 mL
		5 mM	0.3352 mL	1.6759 mL	3.3518 mL
		10 mM	0.1676 mL	0.8379 mL	1.6759 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (4.19 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.19 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (4.19 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Tetragastrin (Cholecystokinin tetrapeptide; CCK-4) is the C-terminal tetrapeptide of gastrin. Tetragastrin can stimulate gastric secretion ^[1] . Tetragastrin is a Cholecystokinin (CCK-4) receptor agonist ^[2] . Gastric mucosal protection ^[3] .
In Vitro	The antagonist of histamine H ₂ -receptors, Cimetidine inhibits the stimulatory effect of histamine in vitro and activates Tetragastrin stimulation of the adenylate cyclase activity. Tetragastrin and histamine activate adenylate cyclase of the rat gastric mucosa via different receptors ^[4] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

In inbred Wistar rats treated with N-methyl-N'-nitro-N-nitrosoguanidine, Tetragastrin (s.c.; 1 mg/kg; every other day) treatment significantly reduces the incidence and the number of adenocarcinomas, and has a significantly lower labelling index of the antral mucosa^[1].

Tetragastrin has potential for enhancing gastric mucosal protection associated with mucus secretion and/or mucus synthesis on the surface mucosa of rat gastric mucosa. A significant increase in the mucin content was noted in the mucus gel and surface mucosal layer. An increase in mucin in the mucus gel and surface mucosa would thus appear due to the administration of Tetragastrin^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Seven-week-old male Wistar rats, each weighing approximately 160 g ^[3]
Dosage:	12, 120, or 400 µg/kg
Administration:	Administered subcutaneously (s.c.); followed by 50% ethanol-induced gastric injury
Result:	Caused a significant increase in mucin content in the corpus mucosa and prevented 50% ethanol-induced gastric mucosal damage in a dose-dependent manner.

REFERENCES

- [1]. M Tatsuta, et al. Effect of 6-hydroxydopamine on gastric carcinogenesis and tetragastrin inhibition of gastric carcinogenesis induced by N-methyl-N'-nitro-N-nitrosoguanidine in Wistar rats. *Cancer Res.* 1989 Aug 1;49(15):4199-203.
- [2]. A A Karelin, et al. Tetragastrin activation of rat gastric mucosa adenylyl cyclase in vitro. *Biull Eksp Biol Med.* 1981 Apr;91(4):440-1.
- [3]. Nathalie Lara, et al. Pulmonary and systemic nitric oxide measurements during CCK-5-induced panic attacks. *Neuropsychopharmacology.* 2003 Oct;28(10):1840-5.
- [4]. Y Komuro, et al. Effects of tetragastrin on mucus glycoprotein in rat gastric mucosal protection. *Gastroenterol Jpn.* 1992 Oct;27(5):597-603.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA