Enterostatin(human,mouse,rat)

Cat. No.: HY-P1067

CAS No.: 117830-79-2

Molecular Formula: $C_{21}H_{36}N_8O_6$

Molecular Weight: 496.56

Sequence: Ala-Pro-Gly-Pro-Arg

Sequence Shortening: APGPR

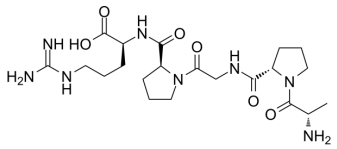
Target: Endogenous Metabolite

Pathway: Metabolic Enzyme/Protease

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 : 125 mg/mL (251.73 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0139 mL	10.0693 mL	20.1386 mL
	5 mM	0.4028 mL	2.0139 mL	4.0277 mL
	10 mM	0.2014 mL	1.0069 mL	2.0139 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.19 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Enterostatin, human, mouse, rat is a pentapeptide that reduces fat intake.

IC_{50} & Target

Human Endogenous Metabolite

In Vitro

In the perfused ratpancreas, Enterostatin, at 100 mM, inhibits the insulin response to 9 mM glucose (by 70%), 0.1 mM tolbutamide (by 40%), and 5 mM arginine (by 70%)[1].

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

In Vivo	Chronically, enterostatin reduces fat intake, bodyweight, and body fat. This response may involve multiple metabolic effects of enterostatin, which include a reduction of insulin secretion, an increase in sympathetic drive to brown adipose tissue, and the stimulation of adrenal corticosteroid secretion[2]. Enterostatin enhances memory consolidation after central or oral administration at a dose of 10 nmol/mouse or 300 mg/kg, respectively, in a step-through type passive avoidance test in mice [3]. A dose of 38 nmol of enterostatin gives a significant inhibition of high-fat food intake, while at a higher dose of 76 nmol the inhibiting effect is lost. During the first hour, after injection of enterostatin, there is even a slight increase in food intake [4]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Silvestre RA, et al. Effect of enterostatin on insulin, glucagon, and somatostatin secretion in the perfused rat pancreas. Diabetes. 1996 Sep;45(9):1157-60.

[2]. Erlanson-Albertsson C, et al. Enterostatin--a peptide regulating fat intake. Obes Res. 1997 Jul;5(4):360-72.

[3]. Ohinata K, et al. Enterostatin (APGPR) enhances memory consolidation in mice. Peptides. 2007 Mar;28(3):719-21.

[4]. Sörhede M, et al. Enterostatin: a gut-brain peptide regulating fat intake in rat. J Physiol Paris. 1993;87(4):273-5.

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