Litorin

Cat. No.: HY-103281

CAS No.: 55749-97-8

Molecular Formula: $C_{51}H_{68}N_{14}O_{11}S$

Molecular Weight: 1085.24

Sequence Shortening: {Pyr}QWAVGHFM

Target: Bombesin Receptor

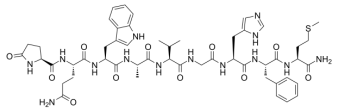
Pathway: GPCR/G Protein

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 : 100 mg/mL (92.15 mM; Need ultrasonic)

H_2O : 2 mg/mL (1.84 mM; ultrasonic and warming and adjust pH to 3 with HCl and heat to 60°C)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	0.9215 mL	4.6073 mL	9.2146 mL
5 mM	0.1843 mL	0.9215 mL	1.8429 mL
10 mM	0.0921 mL	0.4607 mL	0.9215 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (2.30 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (2.30 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Litorin, an amphibian bombesin peptide derivative, is an bombesin receptor agonist. Litorin stimulates the contraction of smooth muscle, stimulates gastrin, gastric acid, and pancreatic secretion, and suppresses the nutriment in vivo[1][2].

In Vitro

^{99m}Tc-Litorin is developed for non-invasive imaging of tumors with overexpressed gastrin-releasing peptide receptors (GRP-R)[1].

[D-Phe^{1},Leu^{8,9}]Litorin inhibits binding of ^{125}I-[Tyr^{4}] BN to murine Swiss 3T3 cells with a K_i of 5.1 nM[2].

Litorin stimulates ^{3}H-Thymidine incorporation in murine Swiss 3T3 cells with an EC_{50} of 2.3 nM[2].

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

In Vivo	Litorin stimulates the contraction of smooth muscle, stimulates gastrin, gastric acid, and pancreatic secretion, and suppresses the nutriment in in vivo experiments[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Kam Leung. ^{99m}Tc-pGlu-Gln-Trp-Ala-Val-Gly-His-Phe-Met-NH2. Molecular Imaging and Contrast Agent Database (MICAD). 2007 Oct 1.

[2]. J M Siegfried, et al. Effects of bombesin and gastrin-releasing peptide on human bronchial epithelial cells from a series of donors: individual variation and modulation by bombesin analogs. Anat Rec. 1993 May;236(1):241-7.

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