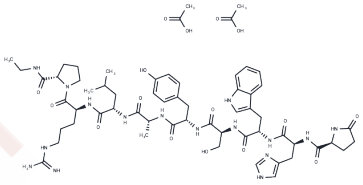
Data Sheet (Cat.No.T1494)

TargetMol

Alarelin Acetate

Chemical Properties



CAS No. : 79561-22-1

Formula: C56H78N16O12

Molecular Weight: 1167.34

Storage: Store at low temperature,Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Alarelin Acetate is a synthetic GnRH agonist which can directly inhibit proliferation and DNA synthesis of rat GSMC through GnRH receptors.
Targets(IC50)	GNRH Receptor
In vitro	Cell viability significantly decreased when exposed to alarelin, as compared to its absence. The peak stimulatory effect on cell viability occurred at a concentration of 10^-5 M, with alarelin demonstrating dose-dependent activity[1].
In vivo	Alarelin effectively suppresses gastric acid secretion in rats through direct interaction with parietal cells and by impairing vagal function [2]. Additionally, Alarelin significantly elevates the ratio of G1 phase while reducing the S phase ratio in rat gastric smooth muscle cells (GSMC) [1].
Cell Research	The cells are trypsinized in a solution of 2.5 g/L trypsin and seeded in a 96-well plate. After the cells are grown for 24 h to approximately 800 g/L subconfluent state, 0.1 mL medium containing 2.5% calf serum and various concentrations (0.001, 0.1, 10 μM) of alarelin is added to each well, respectively, and incubated for 24 h in a CO2 incubator. Each concentration is tested in at least 12 wells. Briefly, 15 μL of MTT solution is added to each well and incubated for 4 h. Then, the medium and MTT are removed and 150 μL of DMSO is added to each well and shaken for 10 min to dissolve the crystal. The OD is determined at 490 nm using an ELISA reader[1].

Solubility Information

Solubility	DMSO: 247.5 mg/mL (212.02 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (1.71 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (8.57 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.8566 mL	4.2832 mL	8.5665 mL
5 mM	0.1713 mL	0.8566 mL	1.7133 mL
10 mM	0.0857 mL	0.4283 mL	0.8566 mL
50 mM	0.0171 mL	0.0857 mL	0.1713 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Chen L, et al. Expression of gonadotropin-releasing hormone receptor and effect of gonadotropin-releasing hormone analogue on proliferation of cultured gastric smooth muscle cells of rats. World J Gastroenterol. 2004 Jun 15;10(12):1780-4.

Chen L, et al. Distribution, cloning and sequencing of GnRH, its receptor, and effects of gastric acid secretion of GnRH analogue in gastric parietal cells of rats. Life Sci. 2005 Feb 4;76(12):1351-65.