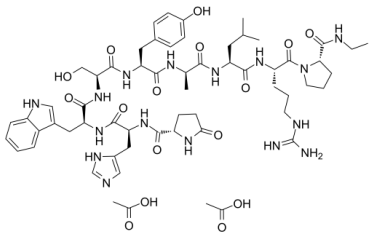
Data Sheet

Product Name:	Alarelin (Acetate)
Cat. No.:	CS-1172
CAS No.:	79561-22-1
Molecular Formula:	C60H86N16O16
Molecular Weight:	1287.42
Target:	GNRH Receptor
Pathway:	GPCR/G Protein
Solubility:	DMSO : 100 mg/mL (77.67 mM; Need ultrasonic); H2O : 100 mg/mL (77.67 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Alarelin acetate is a synthetic **GnRH** agonist. **In Vitro:** The cell viability in the presence of alarelin was significantly lower than that in the absence of alarelin. The maximum stimulatory effect on cell viability was achieved at a concentration of 10^{-5} M and it acted in a dose-dependent manner[1] **In Vivo:** Alarelin could inhibit the gastric acid secretion both by direct actions on parietal cells in rats and by inhibiting vagous function[2]. Alarelin could significantly enhance ratio of G1 phase and decrease ratio of S phase of GSMC of rats[1] .

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]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 μ M) of alarelin is added to each well, respectively, and incubated for 24 h in a CO_2 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] . **Animal Administration:** [2]Rats: Male Sprague-Dawley rats are divided into two groups. In Group I: Gastric acid secretion is measured in a chambered stomach. Briefly, the abdomen is incised, and both the stomach and duodemun are exposed and tied respectively; then 1.5 mL 0.9% sodium chloride (containing Alarelin, 2 μg/kg) is infused into the each chambered stomach. After 15, 30, 45, 60 min, the gastric juice is drew out of the chambered stomach and the pH is measured in the ABL-500 respectively. The control is infused saline instead of Alarelin. In Group II: After anaesthetized, 2 mL Alarelin (2 μg/kg) is administered into the tail vein. The control is injected the saline instead of Alarelin. Then, the stomach and duodenum are tied and infused 1.5 mL saline immediately. After 15, 30, 45, 60 min, the gastric juice is also drew out of the chambered stomach and the pH is measured in the ABL-500 respectively[2].

References:

[1]. 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.

[2]. 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.

CAIndexNames:

1-9-Luteinizing hormone-releasing factor (swine), 6-D-alanine-9-(N-ethyl-L-prolinamide)-, acetate (1:2)

SMILES:

O=C(N[C@@H](CO)C(N[C@@H](CC1=CC=C(O)C=C1)C(N[C@H](C)C(N[C@@H](CC(C)C)C(N[C@@H](CCCNC(N)=N)C(N2CCC[C@H]2C(NCC)=O)=O)=O)=O)=O)[C@@H](NC([C@@H](NC([C@@H](N3)CCC3=O)=O)CC4=CN=CN4)=O)CC5=CNC6=CC=CC=C65.CC(O)=O.CC(O)=O

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

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