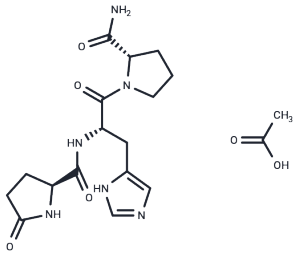
Data Sheet (Cat.No.T6956L)

TargetMol

Protirelin Acetate(24305-27-9 free base)

Chemical Properties



CAS No. : 25575-91-1

Formula: C18H26N6O6

Molecular Weight: 422.44

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

Biological Description

Description	Protirelin Acetate(24305-27-9 free base) (Thyroliberin Acetate) is a tripeptide that stimulates the release of thyrotropin and prolactin.
Targets(IC50)	Thyroid hormone receptor(THR)
In vivo	Protirelin (TRH) is an evolutionarily ancient neuropeptide, having its origin before the divergence of protostomes and deuterostomes, and may ancestrally have been involved in the control of postembryonic growth and reproduction. The effect of the thyrotropin-releasing hormone (Protirelin, TRH), one of the hypothalamic releasing hormones, on body temperature is investigated in the rat. Protirelin, in doses of 1, 5, 10 and 20 mg/kg, is injected intraperitoneally to male Wistar rats weighing 200-250 g. Protirelin causes a temporary rise in body temperature dose-dependently. The thyroidectomized rats injected 20 mg/kg of Protirelin which induces a significant hyperthermia in the sham-operated animals, fail to show a rise in body temperature. The present results suggest that a release of thyroid hormone might participate in the hyperthermic action of Protirelin
Animal Research	Protirelin (TRH tartRatse) is dissolved in physiological saline (Rats).RatsNinety male Wistar rats weighing 200-250 g are subjected to the study. In the first experiment, 50 rats are divided into five groups randomly. Four doses of Protirelin dissolved in physiological saline, i. e., 1 mg/kg, 5 mg/kg, 10 mg/kg and 20 mg/kg, are administered intraperitoneally to the four groups and saline to the remaining control group. Rectal temperature is measured at the place 5 cm inner from the anus with the electronic thermister before and after treatment with Protirelin or saline. In the second experiment, 40 rats are thyroidectomized or sham-operated under the anesthesia by thiopental sodium. Ten days after the operation, 20 mg/kg of Protirelin or saline is administered to the thyroidectomized and sham-operated animals by i. p. and rectal temperature is measured using the same method as used in the first experiment. These two experiments are undertaken from 1 p, m, to 4 p. m. and the room temperature is kept at 24±1°C through the experiments including the breeding period. For a statistical analysis, Student's t test (two-tailed) is adopted.

Solubility Information

Solubility	DMSO: 27.5 mg/mL (65.1 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3672 mL	11.836 mL	23.672 mL
5 mM	0.4734 mL	2.3672 mL	4.7344 mL
10 mM	0.2367 mL	1.1836 mL	2.3672 mL
50 mM	0.0473 mL	0.2367 mL	0.4734 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

Van Sinay E,etal.Evolutionarily conserved TRH neuropeptide pathway regulates growth in Caenorhabditis elegans. Proc Natl Acad Sci U S A. 2017 May 16;114(20):E4065-E4074.

Noda Y,etal.Hyperthermia induced by thyrotropin-releasing hormone (TRH, protirelin) in the rat.Kurume Med J. 1979;26(2):107-12.

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