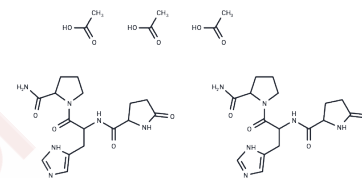


## Protirelin Acetate

## Chemical Properties

CAS No. :	120876-23-5
Formula:	C <sub>16</sub> H <sub>22</sub> N <sub>6</sub> O <sub>4</sub> .3/2C <sub>2</sub> H <sub>4</sub> O <sub>2</sub>
Molecular Weight:	452.46
Storage:	Store at low temperature, Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Protirelin Acetate (TRH Acetate) is a thyrotropin-releasing hormone, stimulating the release of thyrotropin and prolactin from the anterior pituitary.
Targets(IC50)	Endogenous Metabolite,Thyroid hormone receptor(THR)
In vivo	Protirelin (TRH) is an ancient neuropeptide that emerged before the divergence of protostomes and deuterostomes, possibly playing a role in regulating postembryonic growth and reproduction[1]. This study explores Protirelin's impact on body temperature, administering intraperitoneal doses of 1, 5, 10, and 20 mg/kg to male Wistar rats weighing 200-250 g. The findings reveal a dose-dependent, temporary increase in body temperature following Protirelin administration. However, thyroidectomized rats injected with 20 mg/kg of Protirelin did not experience a temperature rise, unlike their sham-operated counterparts. These observations indicate that thyroid hormone release may contribute to Protirelin's hyperthermic effect[2].

## Solubility Information

Solubility	H <sub>2</sub> O: 50 mg/mL (110.51 mM),Sonication is recommended. DMSO: 250 mg/mL (552.54 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 (4.42 mM),Sonication is recommended. <i>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.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.2101 mL	11.0507 mL	22.1014 mL
5 mM	0.442 mL	2.2101 mL	4.4203 mL
10 mM	0.221 mL	1.1051 mL	2.2101 mL
50 mM	0.0442 mL	0.221 mL	0.442 mL

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

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