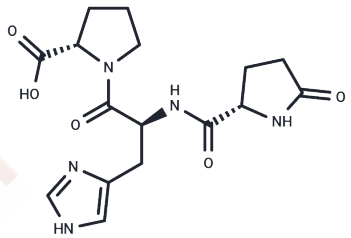
Data Sheet (Cat.No.T7407)

TargetMol

Thyrotropin-Releasing Hormone (TRH), Free Acid

Chemical Properties



CAS No. : 24769-58-2

Formula: C16H21N5O5

Molecular Weight: 363.37

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	Thyrotropin-Releasing Hormone (TRH), Free Acid (TRH-OH), induces various thyroidal and non-thyroidal effects, most notably the feedback regulation of thyroid hormone levels.
Targets(IC50)	Others
In vitro	Thyrotropin-releasing-hormone (TRH) stimulated the release of newly synthesized GH and PRL, but not thyroid-stimulating hormone. In addition, TRH stimulated a dose-related increase in the release of newly synthesized GH and PRL at 10(-9) to 10(-7) M. Cyclo(His-Pro) stimulated the release of newly synthesized GH dose- dependently. TRH, cyclo(His-Pro), and hGHRH stimulated GH synthesis, while SRIF inhibited this at 10(-7) M. The release of newly synthesized PRL into culture medium was also stimulated by TRH and hGHRH, but inhibited by SRIF. PRL synthesis was not affected by TRH-OH and cyclo (His-Pro). Intracellular contents of GH and PRL in the pituitary did not change significantly.TRH plays an important role in both GH and PRL synthesis and release[1].

Solubility Information

Solubility	DMSO: 122.5 mg/mL (337.12 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.752 mL	13.7601 mL	27.5202 mL
5 mM	0.5504 mL	2.752 mL	5.504 mL
10 mM	0.2752 mL	1.376 mL	2.752 mL
50 mM	0.055 mL	0.2752 mL	0.5504 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

Kagabu Y , Mishiba T , Okino T , et al. Effects of Thyrotropin-Releasing Hormone and Its Metabolites, Cyclo(His-Pro) and TRH-OH, on Growth Hormone and Prolactin Synthesis in Primary Cultured Pituitary Cells of the Common Carp, Cyprinus carpio[J]. General & Comparative Endocrinology, 1998, 111(3):395-403.

Lopez-Barneo J , Castellano A , Toledo-Aral J . Thyrotropin-releasing-hormone (TRH) and its physiological metabolite TRH-OH inhibit Na+ channel activity in mammalian septal neurons.[J]. Proceedings of the National Academy of Sciences, 1990, 87(20):8150-8154.

Eleonore F , Richard W . The forgotten effects of thyrotropin-releasing hormone: metabolic functions and medical applications[J]. Frontiers in Neuroendocrinology, 2018:S0091302218300384-.