

Product Name: Taltirelin

Catalog No.: 2672

Batch No.: 2

CAS Number: 103300-74-9

IUPAC Name: N-[[[4S]-Hexahydro-1-methyl-2,6-dioxo-4-pyrimidinyl]carbonyl]-L-histidyl-L-prolinamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₂₃N₇O₅·H₂O

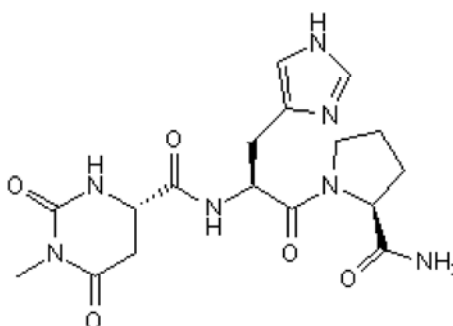
Batch Molecular Weight: 423.43

Physical Appearance: White solid

Solubility: water to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.42 (Dichloromethane:Methanol:2M NH₃ [10:3])

HPLC: Shows 97% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -10.6 (Concentration = 1, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.22	5.95	23.16
Found	48.54	5.84	22.73

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Description:

Taltirelin is a synthetic thyrotropin-releasing hormone (TRH) analog. Displays ~ 30 - 100-fold more potent CNS activity and ~ 50-fold weaker endocrine activity than TRH. Antinociceptive and neuroprotective.

Physical and Chemical Properties:

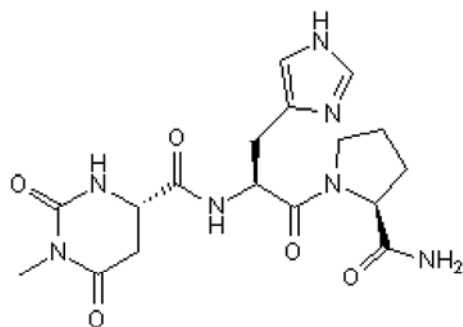
Batch Molecular Formula: C₁₇H₂₃N₇O₅·H₂O

Batch Molecular Weight: 423.43

Physical Appearance: White solid

Minimum Purity: ≥96%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 50 mM

Standard retail vials are prepared by lyophilisation. The product may appear as a solid, a gel or a film. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Tanabe *et al* (2007) The synthetic TRH analogue taltirelin exerts modality-specific antinociceptive effects via distinct descending monoaminergic systems. *Br.J.Pharmacol.* **150** 403. PMID: 17220907.

Urayama *et al* (2002) Neuroprotective effect and brain receptor binding of taltirelin, a novel thyrotropin-releasing hormone (TRH) analogue, in transient forebrain ischemia of C57BL/6J mice. *Life Sci.* **72** 601. PMID: 12467901.

Suzuki *et al* (1990) Synthesis and central nervous system actions of thyrotropin-releasing hormone analogues containing a dihydroorotic acid moiety. *J.Med.Chem.* **33** 2130. PMID: 2115588.

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