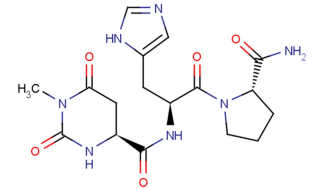


Taltirelin

### Chemical Properties

CAS No.:	103300-74-9
Formula:	C17H23N7O5
Molecular Weight:	405.41
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



### Biological Description

Description	Taltirelin is a thyrotropin-releasing hormone receptor (TRH-R) superagonist (IC50 of 910 nM and EC50 of 36 nM for stimulating an increase in cytosolic Ca <sup>2+</sup> concentration (Ca <sup>2+</sup> release))[1].
Targets(IC <sub>50</sub> )	Thyrotropin-releasing hormone receptor: None
In vivo	Taltirelin (TAL), in mouse models of CRF. To model fatigue, we used a mouse model of chemotherapy, a mouse model of radiation therapy, and mice bearing colon 26 carcinoma tumors. We used the treadmill fatigue test to assess fatigue-like behavior after treatment with TAL. Additionally, we used wild-type and TRH receptor knockout mice to determine which TRH receptor was necessary for the actions of TAL. Tumor-bearing mice displayed muscle wasting and all models caused fatigue-like behavior, with mice running a shorter distance in the treadmill fatigue test than controls. TAL reversed fatigue-like behavior in all three models and the mouse TRH1 receptor was necessary for the effects of TAL. These data suggest that TAL may be useful in alleviating fatigue in all cancer patients and provide further support for evaluating TAL as a potential therapy for CRF in humans[1].

### Solubility Information

Solubility	DMSO: 30 mg/mL (74 mM) ( < 1 mg/ml refers to the product slightly soluble or insoluble)
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#### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.467 mL	12.333 mL	24.666 mL
5 mM	0.493 mL	2.467 mL	4.933 mL
10 mM	0.247 mL	1.233 mL	2.467 mL
50 mM	0.049 mL	0.247 mL	0.493 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Dougherty J P , Wolff B S , Cullen M J , et al. Taltirelin alleviates fatigue-like behavior in mouse models of cancer-related fatigue.[J]. Pharmacological Research, 2017, 124:1-8.
2. Thirunarayanan N, et al. Taltirelin is a superagonist at the human thyrotropin-releasing hormone receptor. Front Endocrinol (Lausanne). 2012 Oct 9;3:120.

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