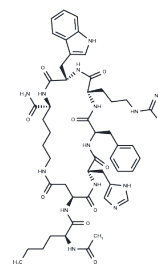


## Melanotan (MT)-II

## Chemical Properties

CAS No. :	121062-08-6
Formula:	C50H69N15O9
Molecular Weight:	1024.18
Storage:	Keep away from moisture Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



## Biological Description

Description	Melanotan (MT)-II, a synthetic melanocortin receptor agonist, is an analogue of the peptide hormone $\alpha$ -melanocyte-stimulating hormone ( $\alpha$ -MSH).
Targets(IC50)	Melanocortin Receptor
In vitro	Melanotan-II (MT-II) acts as a powerful, non-selective agonist targeting melanocortin receptors (MC1, MC3, MC4, and MC5), which play crucial roles in various physiological systems including pigmentation, energy balance, sexual health, immune response, inflammation, and cardiovascular function[1].
In vivo	Melanotan (MT)-II functions as a potent inducer of penile erection, demonstrating dose-dependent activity. It reduces the time until the first erectile event and enhances erectile responses following cavernous nerve stimulation. Research indicates that at a dosage of 1 mg/kg intravenously, MT-II facilitates erection by increasing the erectile response. Additionally, MT-II has been shown to possess neuroprotective qualities and promote peripheral nerve regeneration, particularly highlighted by its significant enhancement of sensory function recovery in rats after sciatic nerve damage when administered at 20 $\mu$ g/kg every 48 hours subcutaneously. In cases of erectile dysfunction in men, MT-II has proven to be an effective initiator of penile erection. Beyond its effects on erectile and sensory functions, MT-II also impacts metabolic parameters, notably reducing food intake and body weight, while inducing thermogenic responses in mouse models.

## Solubility Information

Solubility	DMSO: 10 mM, Sonication is recommended. H2O: 250 mg/mL (244.1 mM) ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	0.9764 mL	4.882 mL	9.7639 mL
5 mM	0.1953 mL	0.9764 mL	1.9528 mL
10 mM	0.0976 mL	0.4882 mL	0.9764 mL
50 mM	0.0195 mL	0.0976 mL	0.1953 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

Breindahl T, et al. Identification and characterization by LC-UV-MS/MS of melanotan II skin-tanning products sold illegally on the Internet. Drug Test Anal. 2015 Feb;7(2):164-72.

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