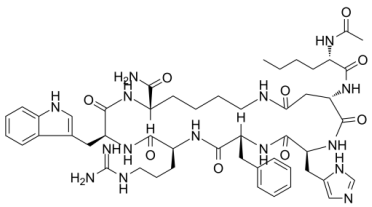
Data Sheet

Product Name:	Melanotan (MT)-II
Cat. No.:	CS-7016
CAS No.:	121062-08-6
Molecular Formula:	C50H69N15O9
Molecular Weight:	1024.18
Target:	Others
Pathway:	Others
Solubility:	H2O : 6.67 mg/mL (6.51 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Melanotan (MT)-II, a synthetic **melanocortin** receptor agonist, is an injectable peptide hormone used to promote tanning. **In Vitro:** Melanotan (MT)-II is a potent non-selective melanocortin receptor agonist with high affinity for MC1, MC3, MC4, and MC5 receptor subtypes which are involved in the regulation of a number of physiological systems such as the pigmentary system, energy homoeostasis, sexual functioning, the immune system, inflammation, and the cardiovascular system[1]. **In Vivo:** Melanotan (MT)-II exerts a dose-dependent inducer activity on erection by eliciting erectile events and shortening latency of the first erectile event to occur. Erectile responses elicited by cavernous nerve stimulation are increased after i.v. melanotan (MT)-II (1 mg/kg), thereby exerting facilitator effect on erection[2]. Melanotan (MT)-II promotes peripheral nerve regeneration and has neuroprotective properties in the rat. Melanotan (MT)-II significantly enhances the recovery of sensory function following a crush lesion of the sciatic nerve in the rat at a dose of 20 μg/kg per 48 h, s.c., but not at a dose of 2 or 50 μg/kg[3]. Melanotan (MT)-II is a potent initiator of penile erection in men with erectile dysfunction[4]. Melanotan (MT)-II reduces food intake and body weight and invokes thermogenic responses in a mouse model[5].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: Melanotan (MT)-II is prepared in saline.[2][5]Rats: To investigate the inducer activity on erection, melanotan (MT)-II or vehicle (saline) is acutely injected i.v., i.t. or within the PVN after a 5 min baseline recording period is obtained. ICP and MAP are then recorded for a 60 min period after saline or melanotan (MT)-II delivery. I.v. injections (three doses; 0.1, 0.3, and 1 mg/kg in saline) are performed with a catheter inserted in the jugular vein[2].

Mice: Melanotan (MT)-II (0.1 and 0.2 nM) or vehicle (artificial cerebrospinal fluid) is administered. SPA is recorded continuously every 5 min. Food intake measurements are taken 6 and 24 h postinjection. Body weight is measured every 24 h. Chow and water are available ad libitum. A 48-h interval occurrs between drug treatments[5].

References:

[1]. 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.

[2]. Giuliano F, et al. Melanotan-II: Investigation of the inducer and facilitator effects on penile erection in anaesthetized rat. Neuroscience. 2006;138(1):293-301.

[3]. Ter Laak MP, et al. The potent melanocortin receptor agonist melanotan-II promotes peripheral nerve regeneration and has neuroprotective properties in the rat. Eur J Pharmacol. 2003 Feb 21;462(1-3):179-83.

[4]. Wessells H, et al. Melanocortin receptor agonists, penile erection, and sexual motivation: human studies with Melanotan II. Int J Impot Res. 2000 Oct;12 Suppl 4:S74-9.

[5]. De Jonghe BC, et al. Food intake reductions and increases in energetic responses by hindbrain leptin and melanotan II are enhanced in mice with POMC-specific PTP1B deficiency. Am J Physiol Endocrinol Metab. 2012 Sep 1;303(5):E644-51.

CAIndexNames:

L-Lysinamide, N-acetyl-L-norleucyl-L-α-aspartyl-L-histidyl-D-phenylalanyl-L-arginyl-L-tryptophyl-, (2→7)-lactam

SMILES:

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