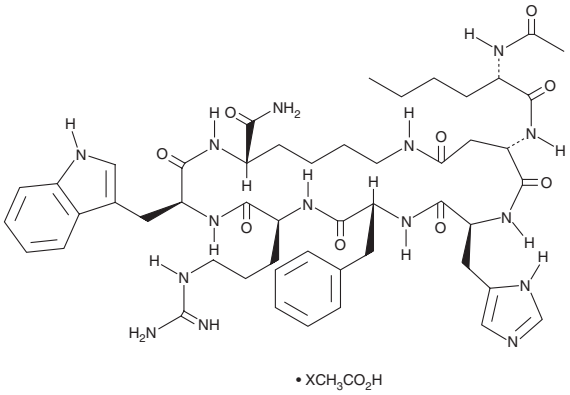
PRODUCT INFORMATION

Melanotan II (acetate)

Item No. 27316



Formal Name:	N-acetyl-L-norleucyl-L-α-aspartyl-L-histidyl-D-phenylalanyl-L-arginyl-L-tryptophyl-L-lysinamide, (2→7)-lactam, acetate
Synonym:	MT II
MF:	$C_{50}H_{69}N_{15}O_9 \bullet XC_2H_4O_2$
FW:	1,024.2
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Melanotan II (acetate) is supplied as a crystalline solid. A stock solution may be made by dissolving the melanotan II (acetate) in the solvent of choice, which should be purged with an inert gas. Melanotan II (acetate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of melanotan II (acetate) in these solvents is approximately 1, 15, and 30 mg/ml, respectively.

Melanotan II (acetate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, melanotan II (acetate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Melanotan II (acetate) has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Melanotan II is an agonist of melanocortin receptor 1 (MC1R), MC3R, MC4R, and MC5R (K_is = 0.67, 34, 6.6, and 46 nM, respectively, in COS cells expressing human recombinant receptors).[1] It improves recovery of sciatic nerve function after mechanical injury in rats, and increases cisplatin-induced decreases in sensory nerve conduction velocity when administered at a dose of 20, but not 2 or 50, µg/kg.[2] Melanotan II (1 nmol, i.c.v.) increases oxygen consumption and protein levels of uncoupling protein 1 (UCP1) in brown adipose tissue homogenates and decreases food intake, body weight, and serum levels of leptin, glucose, insulin, and cholesterol (Item No. 9003100) in chow-fed and diet-induced obese rats.[3]

References

1. Schiöth, H.B., Müceniece, R., Mutulis, F., *et al.* Selectivity of cyclic [D-Nal7] and [D-Phe7] substituted MSH analogues for the melanocortin receptor subtypes. *Peptides* **18(7),** 1009-1013 (1997).
2. Ter Laak, M.P., Brakkee, J.H., Adamn, R.A., *et al.* The potent melanocortin receptor agonist melanotan-II promotes peripheral nerve regeneration and has neuroprotective properties in the rat. *Eur. J. Pharmacol.* **462(1-3),** 179-183 (2003).
3. Li, G., Zhang, Y., Wilsey, J.T., *et al.* Unabated anorexic and enhanced thermogenic responses to melanotan II in diet-induced obese rats despite reduced melanocortin 3 and 4 receptor expression. *J. Endocrinol.* **182(1),** 123-132 (2004).

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