Melanotan II

alpha-MSH Cyclic Analog | Non-Selective Melanocortin Agonist | MC1R/MC3R/MC4R/MC5R

COMPOUND OVERVIEW

Melanotan II is a synthetic cyclic analog of alpha-MSH, originally developed at the University of Arizona. It is a non-selective melanocortin receptor agonist active at MC1R, MC3R, MC4R, and MC5R. Unlike PT-141, its broad receptor profile produces multiple concurrent physiological effects that can complicate isolated pathway research.

MECHANISM OF ACTION

MC1R agonism stimulates melanocyte production of eumelanin, producing UV-independent skin darkening. MC4R agonism mediates CNS effects including appetite modulation. MC5R activity contributes to exocrine gland effects. The broad receptor engagement results in concurrent biological effects across multiple systems simultaneously.

RESEARCH APPLICATIONS

- Melanogenesis and MC1R-mediated pigmentation research
- Broad melanocortin receptor pharmacology comparative studies
- UV-independent melanin pathway mechanism investigation
- Appetite and energy homeostasis pathway research via MC4R

EVIDENCE STATUS & KNOWN LIMITATIONS

> ***Evidence Status:*** *Melanotan II is not approved by any regulatory body and has not completed clinical trials. It is associated with documented adverse events in case reports including atypical naevus changes, nausea, and blood pressure effects. The non-selective receptor profile makes it a less precise research tool than selective melanocortin agonists. Researchers must consult current safety literature.*

ANALYTICAL & STORAGE DATA

PURITY	**>99.6% by HPLC/MS**	PHYSICAL FORM	**Lyophilised Powder**
STORAGE	**2-8 C**	RECEPTOR PROFILE	**MC1R, MC3R, MC4R, MC5R**
RECONSTITUTION	**Bacteriostatic Water (USP)**	BATCH DOCS	**Available on Request**

RECONSTITUTION NOTE

Introduce reconstitution solvent against the vial wall. Allow complete dissolution without agitation. Refrigerate post-reconstitution. Protect from prolonged temperature exposure.

REGULATORY CLASSIFICATION: All BioUnfolding compounds are strictly intended for laboratory evaluation and in-vitro analysis. These materials are not intended for human consumption, veterinary use, or therapeutic application. Researchers are solely responsible for compliance with applicable local regulations including SAHPRA guidelines.

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