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# α-MSH Protein
**A Ligand of Melanocortin G-Protein Coupled Receptor**
**Catalog # PG10016**

## Specification

### α-MSH Protein - Product Information

### α-MSH Protein - Additional Information

**Storage**
-20°C

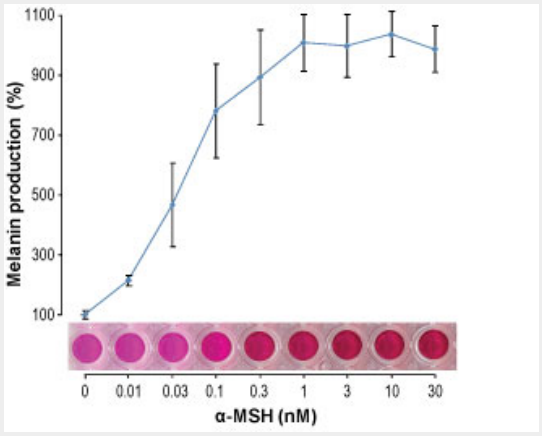
**Precautions**
α-MSH Protein is for research use only and not for use in diagnostic or therapeutic procedures.

### α-MSH Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

### α-MSH Protein - Images




alpha-MSH - Abgent alpha-MSH induces melanogenesis in B16 melanoma cells.Cells were incubated with increasing concentrations of α-MSH(#PG10016). Melanin production was measured after 3 days and plotted against α-MSH concentrations (ED50 = 67 ng/ml, upper graph). Below the

graph is a visual representation of melanin production intensity following α-MSH stimulation for three days.

**α-MSH Protein - Background**

α-MSH is a neuropeptide originally isolated from the pituitary gland1. α-MSH is produced by post-translational processing of a precursor protein, proopiomelanocortin (POMC)2. In most vertebrates but not in mammals, α-MSH is produced in the intermediate lobe of the pituitary gland. The biological activities of α-MSH are mediated through a family of five specific G-protein coupled receptors: MCR1, MCR2, MCR3, MCR4, and MCR5. α-MSH is an evolutionarily highly conserved peptide action that induces pigment dispersion in skin melanocytes of amphibians, reptiles and mammals by stimulating melanin production3,4.However, in human and other mammals, α-MSH acts in the brain in appetite suppresion and sexual arousal. Some cases of extreme obesity have been traced to mutated α-MSH receptor in the brain. Presumably, these people are unable to respond to the appetite-suppressing effect of α-MSH5. α-MSH has significant anti-inflammatory properties, mediated through its binding to MCR16 and includes regulation of expression and secretion of chemokines, downregulation of proinflammatory signal-induced NF-kB activation and adhesion molecule expression, prostaglandin E2 synthesis, as well as induction of interleukin-107.

**α-MSH Protein - References**

1 . Lerner, A.B. et al. (1954) AMA Arch. Derm. Syphilol.70,669.2 . Pritchard, L.E, and White, A. (2007) Endocrinology148,4201.3 . Nakanishi, S. et al.(1979)Nature278,423.4 . Tsatmali, T. et al.(2002)J. Histochem. Cytochem.50,125.5 . Bloomgarden, Z. T. (2002) Diabetes Care.25,789.6 . Catania, A. et al.(2004)Pharmacol. Rev.56,1.7 . Böhm, M. et al.(2006)Cell. Mol. Biol.52,61.