



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

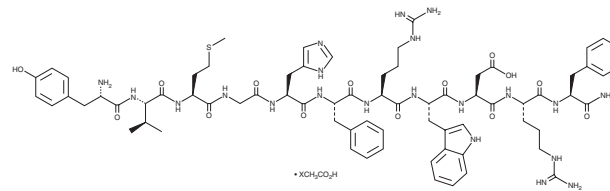
[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# PRODUCT INFORMATION



## $\gamma_1$ -MSH (human, mouse, rat, bovine) (acetate) Item No. 42252

**Formal Name:** (3S,6S,9S,12S,15S,21S,24S,27S)-15-((1H-imidazol-5-yl)methyl)-6-((1H-indol-3-yl)methyl)-27-amino-3-(((S)-1-(((S)-1-amino-1-oxo-3-phenylpropan-2-yl)amino)-5-guanidino-1-oxopentan-2-yl)carbamoyl)-12-benzyl-9-(3-guanidinopropyl)-28-(4-hydroxyphenyl)-24-isopropyl-21-(2-(methylthio)ethyl)-5,8,11,14,17,20,23,26-octaoxo-4,7,10,13,16,19,22,25-octaazaocacosanoic acid, acetate



**Synonym:**  $\gamma_1$ -Melanocyte-stimulating Hormone

**Peptide Sequence:** YVMGHFRWDRF-NH<sub>2</sub>

**MF:** C<sub>72</sub>H<sub>97</sub>N<sub>21</sub>O<sub>14</sub>S • XC<sub>2</sub>H<sub>4</sub>O<sub>2</sub>

**FW:** 1,512.8

**Purity:** ≥95%

**Supplied as:** A 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

$\gamma_1$ -MSH (human, mouse, rat, bovine) (acetate) is supplied as a solid. A stock solution may be made by dissolving the  $\gamma_1$ -MSH (human, mouse, rat, bovine) (acetate) in the solvent of choice, which should be purged with an inert gas.  $\gamma_1$ -MSH (human, mouse, rat, bovine) (acetate) is sparingly soluble (1-10 mg/ml) in DMSO.

### Description

$\gamma_1$ -Melanocyte-stimulating hormone ( $\gamma_1$ -MSH) is a peptide hormone produced by post-translational processing of proopiomelanocortin (POMC) in the pituitary gland.<sup>1</sup> It selectively binds to melanocortin receptor 1 (MC1R) and MC3R over MC4R and MC5R ( $K_{i,S} = 0.025, 0.063, >100,$  and  $>100 \mu\text{M}$ , respectively, in insect cells expressing the human receptors) but also binds to opioid receptors in rat brain tissue homogenates ( $IC_{50} = 5.9 \mu\text{M}$ ).<sup>2,3</sup>  $\gamma_1$ -MSH (10  $\mu\text{M}$ ) inhibits contractions induced by the neuropeptide FMRF-amide in isolated *M. edulis* catch muscle.<sup>4</sup> Intracisternal administration of  $\gamma_1$ -MSH (0.3 nmol/animal) increases the latency to tail flick in the tail-flick test and inhibits haloperidol-induced catalepsy in mice.<sup>5</sup>  $\gamma_1$ -MSH (0.01 nmol/animal) also inhibits LPS-induced nitric oxide (NO) release in mouse forebrain *in vivo*.<sup>2</sup>

### References

1. Rubakhin, S.S., Churchill, J.D., Greenough, W.T., *et al.* Profiling signaling peptides in single mammalian cells using mass spectrometry. *Anal. Chem.* **78(20)**, 7267-7272 (2006).
2. Muceniece, R., Zvejniece, L., Liepinsh, E., *et al.* The MC<sub>3</sub> receptor binding affinity of melanocortins correlates with the nitric oxide production inhibition in mice brain inflammation model. *Peptides* **27(6)**, 1443-1450 (2006).
3. Oki, S., Nakao, K., Nakai, Y., *et al.* ' $\gamma$ -MSH' fragments from ACTH-beta-LPH precursor have an affinity for opiate receptors. *Eur. J. Pharmacol.* **64(2-3)**, 161-164 (1980).
4. Muneoka, Y. and Saitoh, H. Pharmacology of FMRFamide in *Mytilus* catch muscle. *Comp. Biochem. Physiol. C Comp. Pharmacol. Toxicol.* **85(1)**, 207-214 (1986).
5. Klusa, V., Germane, S., Svirskis, S., *et al.* The  $\gamma_2$ -MSH peptide mediates a central analgesic effect via a GABA-ergic mechanism that is independent from activation of melanocortin receptors. *Neuropeptides* **35(1)**, 50-57 (2001).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/10/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM