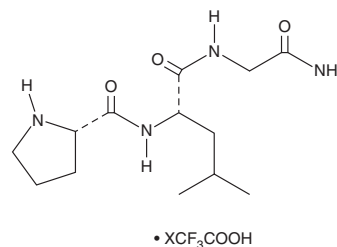


# PRODUCT INFORMATION

## Melanocyte-Stimulating Hormone Release-Inhibiting Factor (trifluoroacetate salt)

Item No. 24476

<b>Formal Name:</b>	L-prolyl-L-leucyl-glycinamide, trifluoroacetate salt
<b>Synonyms:</b>	MIF-1, MSH-R-IF
<b>MF:</b>	$C_{13}H_{24}N_4O_3 \cdot XCF_3COOH$
<b>FW:</b>	284.4
<b>Purity:</b>	≥95%
<b>Supplied as:</b>	A lyophilized powder
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥4 years



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

### Laboratory Procedures

Melanocyte-stimulating hormone release-inhibiting factor (MSH-R-IF) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the MSH-R-IF (trifluoroacetate salt) in water. The solubility of MSH-R-IF (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

MSH-R-IF is a hypothalamic tripeptide that binds to rat striatum ( $K_d = 4.69$  nM) and has diverse biological activities.<sup>1-4</sup> *In vivo*, MSH-R-IF (0.1 mg/kg) decreases immobility of mice in the forced swim test, indicating antidepressant-like activity.<sup>2</sup> MSH-R-IF (20 mg/kg) increases striatal concentration of dopamine (Item No. 21992) and the dopamine metabolites DOPAC, 3-methoxy tyramine (3-MT; Item No. 20511), and homovanillic acid (HVA) in a mouse model of Parkinson's disease induced by MPTP.<sup>3</sup> It decreases vacuous chewing movements induced by haloperidol (Item No. 12014) in a rat model of tardive dyskinesia when administered at a dose of 2 mg/kg.<sup>4</sup> MSH-R-IF also has anti-opiate effects, reversing analgesia induced by morphine (Item No. ISO60147) and an enkephalin in mice in a radiant heat tail-flick assay.<sup>1</sup>

### References

- Pan, W. and Kastin, A.J. From MIF-1 to endomorphin: The Tyr-MIF-1 family of peptides. *Peptides* **28(12)**, 2411-2434 (2007).
- Kastin, A.J., Abel, D.A., Ehrensing, R.H., *et al.* Tyr-MIF-1 and MIF-1 are active in the water wheel test for antidepressant drugs. *Pharmacol. Biochem. Behav.* **21(5)**, 767-771 (1984).
- Marcotte, E.R., Chugh, A., Mishra, R.K., *et al.* Protection against MPTP treatment by an analog of Pro-Leu-Gly-NH<sub>2</sub> (PLG, MIF-1). *Peptides* **19(2)**, 403-406 (1998).
- Sharma, S., Paladino, P., Gabriele, J., *et al.* Pro-Leu-glycinamide and its peptidomimetic, PAOPA, attenuate haloperidol induced vacuous chewing movements in rat: A model of human tardive dyskinesia. *Peptides* **24(2)**, 313-319 (2003).

#### 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

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