

# PRODUCT INFORMATION



## ACTH (1-10) (human, mouse, rat, porcine, bovine, ovine) (trifluoroacetate salt) Item No. 27105

<b>Formal Name:</b>	L-seryl-L-tyrosyl-L-seryl-L-methionyl-L- $\alpha$ -glutamyl-L-histidyl-L-phenylalanyl-L-arginyl-L-tryptophyl-glycine, trifluoroacetate salt	
<b>Synonyms:</b>	Adrenocorticotropin Hormone (1-10), Corticotropin (1-10)	H—Ser—Tyr—Ser—Met—Glu—His—Phe—Arg—Trp—Gly—OH
<b>MF:</b>	$C_{59}H_{78}N_{16}O_{16}S \cdot XCF_3COOH$	$\cdot XCF_3COOH$
<b>FW:</b>	1,299.4	
<b>Purity:</b>	$\geq 95\%$	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	$-20^\circ C$	
<b>Stability:</b>	$\geq 4$ years	

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

### Laboratory Procedures

ACTH (1-10) (human, mouse, rat, porcine, bovine, ovine) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the ACTH (1-10) (human, mouse, rat, porcine, bovine, ovine) (trifluoroacetate salt) in water. The solubility of ACTH (1-10) (human, mouse, rat, porcine, bovine, ovine) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Adrenocorticotropin hormone (ACTH) (1-10) is an N-terminal peptide fragment of ACTH, a peptide hormone produced by the anterior pituitary gland that is involved in the biological stress response.<sup>1,2</sup> The amino acid sequence of ACTH (1-10) is common to ACTH and  $\alpha$ -melanocyte stimulating hormone.<sup>3</sup> ACTH (1-10) is an agonist of melanocortin receptor 3 (MC3R) and MC4R ( $EC_{50}$ s = 2.6 and 200 nM, respectively, for the recombinant human receptors) and increases adenylate cyclase activity in HEK293 cells expressing human recombinant MC1R ( $EC_{50}$  = 25 nM).<sup>3,4</sup> It inhibits extinction of the conditioned avoidance response rats in shuttle-box and pole-jumping tests when administered at doses of 10 and greater than 20  $\mu$ g, respectively.<sup>1,5</sup> Intracerebroventricular injection of ACTH (1-10) reduces the incidence and severity of cold-restraint stress-induced gastric lesions in rats.<sup>3</sup>

### References

1. Bohus, B. and De Wied, D. *Science* **153**(3733), 318-320 (1966).
2. Strand, F.L., Lee, S.J., Zuccarelli, L.A., et al. *Rev. Neurosci.* **4**(4), 321-363 (1993).
3. Miwa, H., Gantz, I., Konda, Y., et al. *J. Pharmacol. Exp. Ther.* **273**(1), 367-372 (1995).
4. Tsatmalia, M., Wakamatsu, K., Graham, A.J., et al. *Ann. N.Y. Acad. Sci.* **885**, 466-469 (1999).
5. van Winersma Greidanus, T.B. and de Wied, D. *Neuroendocrinology* **7**(5), 291-301 (1971).
6. Hernandez, D.E., Morin, P., Salaiz, A.B., et al. *Brain Res. Bull.* **25**(4), 605-607 (1990).

#### 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.

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