

PRODUCT INFORMATION



ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine)

Item No. 27430

CAS Registry No.:	67224-41-3
Formal Name:	L-methionyl-L- α -glutamyl-L-histidyl-L-phenylalanyl-L-arginyl-L-tryptophylglycyl-L-lysine
Synonym:	MEHFRWGK-OH
MF:	C ₅₀ H ₇₁ N ₁₅ O ₁₁ S
FW:	1,090.3
Purity:	≥98%
UV/Vis.:	λ_{max} : 281 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

H—Met—Glu—His—Phe—Arg—Trp—Gly—Lys—OH

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

Laboratory Procedures

ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) is supplied as a solid. A stock solution may be made by dissolving the ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) in the solvent of choice, which should be purged with an inert gas. ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) in these solvents is approximately 10 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of ACTH (4-11) (human, mouse, rat, porcine, bovine, ovine) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ACTH (4-11) is a peptide fragment of adrenocorticotrophic hormone (ACTH; Item No. 24257), a peptide hormone found in the brain that is involved in the biological stress response.¹ ACTH (4-11) induces differentiation of melanocytes when used at a concentration of 1,000 nM.² It inhibits angiotensin converting enzyme (ACE) activity in homogenized canine lung with an IC₅₀ value of 24 μ M.³ ACTH (4-11) has been used to determine substrate specificity of recombinant *H. zea* carboxypeptidase B enzyme (CPBHz).⁴

References

1. Strand, F.L., Lee, S.J., Zuccarelli, L.A., *et al.* Non-corticotrophic ACTH peptides modulate nerve development and regeneration. *Rev. Neurosci.* **4(4)**, 321-363 (1993).
2. Vatolin, S., Phillips, J.G., Jha, B.K., *et al.* Novel protein disulfide isomerase inhibitor with anticancer activity in multiple myeloma. *Cancer Res.* **76(11)**, 3340-3350 (2016).
3. Verma, P.S., Miller, R.L., Taylor, R.E., *et al.* Inhibition of canine lung angiotensin converting enzyme by ACTH and structurally related peptides. *Biochem. Biophys. Res. Commun.* **104(4)**, 1484-1488 (1982).
4. Bayés, A., Rodríguez de la Vega, M., Vendrell, J., *et al.* Response of the digestive system of *Helicoverpa zea* to ingestion of potato carboxypeptidase inhibitor and characterization of an uninhibited carboxypeptidase B. *Insect Biochem. Mol. Biol.* **36(8)**, 654-664 (2006).

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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