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PRODUCT INFORMATION



ACTH (7-38) (human) (trifluoroacetate salt)

Item No. 41547

Formal Name:	31-L-serine- α^{7-38} -corticotropin (swine), trifluoroacetate salt	
Synonyms:	Adrenocorticotrophic Hormone (7-38), α^{7-38} -ACTH, CIP, Corticotropin Inhibitory Peptide	H-Phe-Arg-Trp-Gly-Lys-Pro-Val-Gly-Lys-Lys-Arg-Arg-Pro-Val-Lys-Val-Tyr-Pro-Asn-Gly-Ala-Glu-Asp-Glu-Ser-Ala-Glu-Ala-Phe-Pro-Leu-Glu-OH
Peptide Sequence:	FRWGKPVGKKRRPVKVPNGAEDESAEAFPLE-OH	
MF:	$C_{167}H_{257}N_{47}O_{46} \cdot XCF_3COOH$	
FW:	3,659.2	
Purity:	$\geq 95\%$	
Supplied as:	A solid	$\bullet XCF_3COOH$
Storage:	-20°C	
Stability:	≥ 4 years	

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

Laboratory Procedures

ACTH (7-38) (human) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the ACTH (7-38) (human) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. ACTH (7-38) (human) (trifluoroacetate salt) is soluble (≥ 10 mg/ml) in DMSO.

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 (7-38) (human) (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. ACTH (7-38) (human) (trifluoroacetate salt) is soluble (≥ 10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Adrenocorticotrophic hormone (ACTH) (7-38) is a peptide fragment of ACTH (Item No. 24257) and an antagonist of melanocortin receptor 2 (MC2R), also known as the ACTH receptor.¹ It inhibits ACTH-induced corticosterone production in isolated rat adrenal cells when used at concentrations of 0.455 or 4.55 μ M. ACTH (7-38) also inhibits angiotensin-converting enzyme 1 (ACE1; $IC_{50} = 750$ nM for the dog enzyme).² It inhibits basal cAMP secretion by isolated rat inner adrenocortical cells when used at a concentration of 1 μ M.³ ACTH (7-38) induces hypotension in normotensive dogs ($ED_{50} = 0.109$ nmol/kg).⁴

References

1. Li, C.H., Chung, D., Yamashiro, D., *et al.* Isolation, characterization, and synthesis of a corticotropin-inhibiting peptide from human pituitary glands. *Proc. Natl. Acad. Sci. U.S.A.* **75**(9), 4306-4309 (1978).
2. 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).
3. Mazzocchi, G., Rebuffat, P., Gottardo, L., *et al.* Vasoactive intestinal peptide stimulates rat adrenal glucocorticoid secretion, through an ACTH receptor-dependent activation of the adenylate cyclase signaling pathway. *Horm. Metab. Res.* **30**(5), 241-243 (1998).
4. Tenner, T.E., Jr., Yang, C.M., Chang, J.K., *et al.* Pharmacological comparison of bPTH-(1-34) and other hypotensive peptides in the dog. *Peptides* **1**(4), 285-288 (1980).

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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