PRODUCT INFORMATION

ACTH (1-39) (trifluoroacetate salt)

Item No. 24257

Synonym: Adrenocorticotropic Hormone (1-39)
MF: $C_{207}H_{308}N_{56}O_{58}S \bullet XCF_3COOH$
FW: 4,541.1
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years

H – Ser – Tyr – Ser – Met – Glu – His – 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 – Phe – OH
• XCF_3COOH

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

Laboratory Procedures

ACTH (1-39) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the ACTH (1-39) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. ACTH (1-39) (trifluoroacetate salt) is soluble in the organic solvent formic acid at a concentration of approximately 1 mg/ml.

Description

ACTH (1-39) is a potent agonist of melanocortin receptor 2 (MC2R) with an EC_{50} value of 57 pM in HeLa cells expressing the mouse receptor.[1] It induces accumulation of cAMP and release of corticosterone from rat adrenal cells in a concentration-dependent manner.[2] ACTH (1-39) also protects neurons from death induced by staurosporine (Item No. 81590), glutamate, NMDA (Item No. 14581), AMPA (Item No. 14571), kainate, quinolinic acid (Item No. 14941), and reactive oxygen species when used at a concentration of 400 nM.[3] Formulations containing ACTH (1-39) have been used in the treatment of systemic lupus erythematosus.

References

1. Kapas, S., Cammas, F.M., Hinson, J.P., *et al.* Agonist and receptor binding properties of adrenocorticotropin peptides using the cloned mouse adrenocorticotropin receptor expressed in a stably transfected HeLa cell line. *Endocrinology* **137(8)**, 3291-3294 (1996).
2. Bristow, A.F., Gleed, C., Fauchère, J.L., *et al.* Effects of ACTH (corticotropin) analogues on steroidogenesis and cyclic AMP in rat adrenocortical cells. Evidence for two different steroidogenically responsive receptors. *Biochem J.* **186(2)**, 599-603 (1980).
3. Lisak, R.P., Nedelkoska, L., Bealmear, B., *et al.* Melanocortin receptor agonist ACTH 1-39 protects rat forebrain neurons from apoptotic, excitotoxic and inflammation-related damage. *Exp. Neurol.* **273**, 161-167 (2015).

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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