Product Data Sheet

Product Name: ACTH (11-24) (human, mouse, rat, porcine, bovine, ovine) (acetate)
Cat. No.: GC92106

Chemical Properties

Cas. No.			
Chemical Name	α11-24-corticotropin, acetate		
SMILES	O=C(N1CCC[C@H]1C(N[C@@H](C(C)C)C(NCC(N[C@@H](CCCCN[H])C(N[C@@H](CCCCN[H])C(N[C@@H](CCC/N=C(N[H])/N)C(N[C@@H](CCC/N=C(N[H])/N)C(N2CCC[C@H]2C(N[C@@H](C(C)C)C(N[C@@H](CCCCN[H])C(N[C@@H](C(C)C)C(N[C@@H](CC3=CC=C(O[H])C=C3)C(N4CCC[C@H]4C(O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)=O)[C@H](CCCCN[H])N[H].CC(O)=O		
Formula	$C_{77}H_{134}N_{24}O_{16}$? $XC_2H_4O_2$	M.Wt	1652
Solubility	DMSO: Slightly soluble: 0.1-1 mg/ml,PBS (pH 7.2): Soluble: ≥10 mg/ml	Storage	-20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	H—Lys—Pro—Val—Gly—Lys—Lys—Arg—Arg—Pro—Val—Lys—Val—Tyr—Pro—OH • XCH_3CO_2H		

Background

Adrenocorticotropic hormone (ACTH) (11-24) is a peptide fragment of ACTH, a peptide hormone found in the brain that is involved in the biological stress response, and an antagonist of melanocortin receptor 2 (MC2R), also known as the ACTH receptor (IC_{50} = ~1 nM in HeLa cells expressing the mouse receptor).[1,2] It induces corticosterone and aldosterone production in isolated rat zona glomerulosa and zona fasciculata cells, respectively, with minimum effective concentrations of 4 and

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3 ?M, respectively.[3] Unlike ACTH (4-11), ACTH (11-24) does not induce differentiation of primary mouse melanocytes.[4] *In vivo*, ACTH (11-24) (1.69 ?g/animal, i.c.v.) inhibits ACTH-induced stretching, yawning, and penile erections in rats.[5]

References:

[1]. Strand, F.L., Lee, S.J., Zuccarelli, L.A., et al.Non-corticotropic ACTH peptides modulate nerve development and regenerationRev. Neurosci.4(4)321-363(1993).
[2]. 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 lineEndocrinology137(8)3291-3294(1996).
[3]. Szalay, K.S., De Wied, D., and Stark, E.Effects of ACTH-(11-24) on the corticosteroid production of isolated adrenocortical cellsJ. Steroid Biochem.32(2)259-262(1989).
[4]. Hirobe, T., and Hiroyuki, A.ACTH4-12 is the minimal message sequence required to induce the differentiation of mouse epidermal melanocytes in serum-free primary cultureJ. Exp. Zool.286(6)632-640(2000).
[5]. Genedani, S., and Bernardi, M.ACTH-(11-24) antagonizes ACTH-(1-24)-induced behavioral syndromeNeuropeptides26(4)241-244(1994).

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA