Product Data Sheet

Product Name: Adrenorphin
Cat. No.: GP10109

Chemical Properties

Cas. No.	88377-68-8		
Chemical Name	Adrenorphin		
SMILES	CC(C)C(C(=O)N)NC(=O)C(CCCN=C(N)N)NC(=O)C(CCCN=C(N)N)NC(=O)C(CCSC)NC(=O)C(CC1=CC=CC=C1)NC(=O)CNC(=O)CNC(=(		
Formula	$C_{44}H_{69}N_{15}O_9S$	M.Wt	984.18
Solubility	≥ 98.4mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	Adrenorphin		

Background

Adrenorphin (metorphamide) is a potent inhibitor of nicotine-induced adrenaline and noradrenaline release with IC50 value of 10 μM [1].

Adrenorphin (metorphamide) is an endogenous, C-terminally amidated, opioid octapeptide (Tyr-Gly-Gly-Phe-Met-Arg-Arg-Val-NH2) that is produced from proteolytic cleavage of proenkephalin A and is widely distributed throughout the mammalian brain [2].

Adrenorphin (metorphamide) is selective nicotine-induced adrenaline and noradrenaline release inhibitor and has higher than 100-fold more potent than the reported nicotine-induced adrenaline and noradrenaline release inhibitor Met5-enkephalin. When tested with bovine adrenal chromaffin cells, Adrenorphin (metorphamide) showed inhibition on 5 μM nicotine-induced ATP release by almost 50% at 5μM and the inhibition was not in a dose-dependent manner [1]. In bioassays and binding assays, Metorphamide exhibited high μ-binding activity, as well as κ-binding activity with nearly half percent toμ-binding activity, while showed no activity on δ-binding [2].

References:
[1]. Marley, P.D., K.I. Mitchelhill, and B.G. Livett, Metorphamide, a novel endogenous adrenal opioid peptide, inhibits nicotine-induced secretion from bovine adrenal chromaffin cells. Brain Res, 1986. 363(1): p. 10-7.
[2]. Weber, E., et al., Metorphamide: isolation, structure, and biologic activity of an amidated opioid octapeptide from bovine brain. Proc Natl Acad Sci U S A, 1983. 80(23): p. 7362-6.

Caution: Product has not been fully validated for medical applications. For research use only.
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