Product Data Sheet

Product Name: α-Endorphin
Cat. No.: GP10081

Chemical Properties

Cas. No.	59004-96-5
SMILES	CC(C)CC(C(=O)NC(C(C)C)C(=O)NC(C(C)O)C(=O)O)NC(=O)C1CCCN1C(=O)C(C(C)O)NC(=O)C(CCC(=O)N)NC(=O)C(CO)NC(=O)C(CCC(
Formula	$C_{77}H_{120}N_{18}O_{26}S$
Solubility	≥ 174.5mg/mL in DMSO
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
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.
Structure	α-Endorphin

Background

α-Endorphin is an endogenous opioid peptide with a length of 16 amino acids, and the amino acid sequence: Tyr-Gly-Gly-Phe-Met-Thr-Ser-Glu-Lys-Ser-Gln-Thr-Pro-Leu-Val-Thr.[1]
α-endorphin is the strongest peptide in delaying avoidance behaviors. Alpha Endorphin has C-terminal sequence of β-LPH, allowing these peptides to have a high affinity for opiate binding sites. Even a slight difference in C-terminal amino acid can have drastic effects on avoidance behavior. The importance in sequencing determines the function of the endorphin.[7] When an N-terminal amino acid such as tyrosine is removed, there seems to be no significant impacts on avoidance behavior. However, when there are adjustments to the C-terminal sequence, like removing β-LPH 61-65; activity of the endorphin decreases.[2]

References:
[1].Hazum E, Chang KJ, Cuatrecasas P (September 1979). "Specific nonopiate receptors for beta-endorphin". Science. 205 (4410): 1033–1035.
[2].de Wied D (1981-01-01). "Neuropeptides in Normal and Abnormal Behavior". In Stark E, Makara GB, Ács Z, Endrőczi E (eds.). Endocrinology, Neuroendocrinology, Neuropeptides. Pergamon. pp. 23–38.

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