Product Data Sheet

Product Name: Dynorphin (2-17), amide, porcine
Cat. No.: GP10070

Chemical Properties

Cas. No.	161874-98-2		
Formula	$C_{90}H_{147}N_{31}O_{20}$	M.Wt	1983.33
Solubility	≥ 198.3mg/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 stored below -20℃ 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			

Background

Dynorphins are a class of opioid peptides that arise from the precursor protein prodynorphin. When prodynorphin is cleaved during processing by proprotein convertase 2 (PC2), multiple active peptides are released: dynorphin A, dynorphin B, and α/β-neo-endorphin[1]. Depolarization of a neuron containing prodynorphin stimulates PC2 processing, which occurs within synaptic vesicles in the presynaptic terminal[2]. Dynorphin is produced in many different parts of the brain, including the hypothalamus, the striatum, the hippocampus and the spinal cord. Dynorphin has been shown to be a modulator of pain response. injecting dynorphin into the subarachnoid space of the rat spinal cord produced dose-dependent analgesia that was measured by tail-flick latency. Analgesia was partially eliminated by opioid antagonist naloxone. dynorphin activates bradykinin receptors, which triggers the release of calcium ions into the cell through voltage-sensitive channels in the cell membrane. Blocking bradykinin receptors in the lumbar region of the spinal cord reversed persistent pain[3]. A multiple pathway system might help explain the conflicting effects of dynorphin in the CNS.

References:

1. Day R, Lazure C, Basak A, Boudreault A, Limperis P, Dong W, Lindberg I (January

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1998). "Prodynorphin processing by proprotein convertase 2. Cleavage at single basic residues and enhanced processing in the presence of carboxypeptidase activity". J. Biol. Chem. 273 (2): 829–36.
2. Yakovleva T, Bazov I, Cebers G, Marinova Z, Hara Y, Ahmed A, Vlaskovska M, Johansson B, Hochgeschwender U, Singh IN, Bruce-Keller AJ, Hurd YL, Kaneko T, Terenius L, Ekström TJ, Hauser KF, Pickel VM, Bakalkin G (October 2006). "Prodynorphin storage and processing in axon terminals and dendrites". FASEB J. 20 (12): 2124–6.

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