PRODUCT INFORMATION

α-Endorphin (human, mouse, rat, porcine, bovine, ovine)

Item No. 24958

CAS Registry No.: 59004-96-5
Formal Name: L-tyrosylglycylglycyl-L-phenylalanyl-L-methionyl-L-threonyl-L-seryl-L-α-glutamyl-L-lysyl-L-seryl-L-glutaminyl-L-threonyl-L-prolyl-L-leucyl-L-valyl-L-threonine
MF: $C_{77}H_{120}N_{18}O_{26}S$
FW: 1,746.0
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥4 years

H—Tyr—Gly—Gly—Phe—Met—Thr—Ser—Glu—Lys—Ser—
Gln—Thr—Pro—Leu—Val—Thr—OH

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

Laboratory Procedures

α-Endorphin (human, mouse, rat, porcine, bovine, ovine) is supplied as a lyophilized powder. A stock solution may be made by dissolving the α-endorphin (human, mouse, rat, porcine, bovine, ovine) in water. The solubility of α-endorphin (human, mouse, rat, porcine, bovine, ovine) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

α-Endorphin is an endogenous neuropeptide that binds to opioid receptors in guinea pig brain membranes (IC_{50} = 97 nM).[1] It induces chemotaxis of human monocytes *in vitro* when used at a concentration of 0.1 nM and inhibits electrically-induced contractions in guinea pig ileum and mouse vas deferens (IC_{50}s = 325 and 27.6 nM, respectively).[1,2] *In vivo*, α-endorphin delays extinction of pole-jumping avoidance behavior in rats (ED_{50}s = 40 and 2 pM, respectively, for s.c. and i.c.v. administration).[3]

References

1. Waterfield, A.A., Leslie, F.M., Lord, J.A., *et al.* Opioid activities of fragments of β-endorphin and of its leucine65-analogue. Comparison of the binding properties of methionine- and leucine-enkephalin. *Eur. J. Pharmacol.* **58(1)**, 11-18 (1979).
2. Sacerdote, P. and Panerai, A.E. Analysis of the beta-endorphin structure-related activity on human monocyte chemotaxis: Importance of the N- and C-terminal. *Peptides* **10(3)**, 565-569 (1989).
3. de Wied, D., Bohus, B., van Ree, J.M., *et al.* Behavioral and electrophysiological effects of peptides related to lipotropin (β-LPH). *J. Pharmacol. Exp. Ther.* **204(3)**, 570-580 (1978).

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