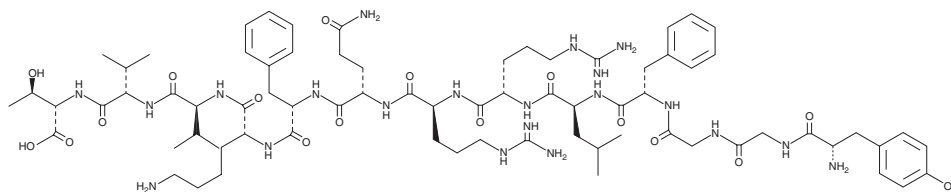


PRODUCT INFORMATION



Dynorphin B Item No. 18178

CAS Registry No.: 83335-41-5
Formal Name: dynorphin B (swine)
Synonyms: Dynorphin B-13, Rimorphin
MF: C₇₄H₁₁₅N₂₁O₁₇
FW: 1,570.8
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 278 nm



Laboratory Procedures

For long term storage, we suggest that dynorphin B be stored as supplied at -20°C. It should be stable for at least two years.

Dynorphin B is supplied as a crystalline solid. A stock solution may be made by dissolving the dynorphin B in the solvent of choice. Dynorphin B is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of dynorphin B in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of dynorphin B can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of dynorphin B in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Dynorphin B is a 13-residue opioid peptide released from the cleavage of prodynorphin and found widely distributed in the central nervous system.^{1,2} It acts as a κ_{1b}-opioid receptor agonist (K_i = 1.1 nM) and has been implicated in antinociceptive functions.³ Dynorphin B has also been used to prime cardiogenesis in pluripotent embryonic stem cells.⁴

References

1. Berman, Y., Juliano, L., and Devi, L.A. Specificity of the dynorphin-processing endoprotease: Comparison with prohormone convertases. *J. Neurochem.* **72**, 2120-2196 (1999).
2. Janecka, A., Fichna, J., and Janecki, T. Opioid receptors and their ligands. *Curr. Top. Med. Chem.* **4**, 1-17 (2004).
3. Dhawan, B.N., Cesselin, F., Raghubir, R., *et al.* International Union of Pharmacology. XII. Classification of opioid receptors. *Pharm. Res.* **48(4)**, 567-592 (1996).
4. Ventura, C., Zinellu, E., Maninchedda, E., *et al.* Dynorphin B is an agonist of nuclear opioid receptors coupling nuclear protein kinase C activation to the transcription of cardiogenic genes in GTR1 embryonic stem cells. *Circ. Res.* **92**, 623-629 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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