



LKT Laboratories, Inc.

Spinorphin, cow

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Product Information

Product ID S6134

CAS No. 137201-62-8

Chemical Name

Synonym

Formula $C_{45}H_{64}N_8O_{10}$

Formula Wt. 877.06

Melting Point

Purity $\geq 95\%$

Solubility Soluble in water (1 mg/mL).

Store Temp $-20^{\circ}C$

Ship Temp Ambient

Description Spinorphin is a heptapeptide with the sequence L-V-V-Y-P-W-T. Spinorphin is an endogenous enkephalinase inhibitor, antagonizing enzymes such as aminopeptidase IV, neutral endopeptidase, dipeptidyl peptidase III (DPP3), and angiotensin-converting enzyme (ACE); it also acts as an antagonist at the P2X3 receptor. Spinorphin exhibits antinociceptive, antidepressant, gastrointestinal motility modulating, anti-inflammatory, and immunomodulatory activities. Spinorphin also acts as an antagonist at N-formylpeptide receptors, preventing binding of chemotactic f-MLF to its receptor on polymorphonuclear (PMN) neutrophils and inhibiting neutrophil functionality.

H-Leu-Val-Val-Tyr-Pro-Trp-Thr-OH

Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
S6134	5 mg	\$179.60
S6134	10 mg	\$299.30
S6134	25 mg	\$598.50

References Thanawala V, Kadam VJ, Ghosh R. Enkephalinase inhibitors: potential agents for the management of pain. *Curr Drug Targets*. 2008 Oct;9(10):887-94. PMID: 18855623.

Jung KY, Moon HD, Lee GE, et al. Structure-activity relationship studies of spinorphin as a potent and selective human P2X(3) receptor antagonist. *J Med Chem*. 2007 Sep 6;50(18):4543-7. PMID: 17676725.

Yamamoto Y, Ono H, Ueda A, et al. Spinorphin as an endogenous inhibitor of enkephalin-degrading enzymes: roles in pain and inflammation. *Curr Protein Pept Sci*. 2002 Dec;3(6):587-99. PMID: 12470213.

Liang TS, Gao JL, Fatemi O, et al. The endogenous opioid spinorphin blocks fMet-Leu-Phe-induced neutrophil chemotaxis by acting as a specific antagonist at the N-formylpeptide receptor subtype FPR. *J Immunol*. 2001 Dec 1;167(11):6609-14. PMID: 11714831.

Nishimura K, Hazato T. Isolation and identification of an endogenous inhibitor of enkephalin-degrading enzymes from bovine spinal cord. *Biochem Biophys Res Commun*. 1993 Jul 30;194(2):713-9. PMID: 8343155.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.