

# PRODUCT INFORMATION



## β-Endorphin (1-26) (human) (trifluoroacetate salt)

Item No. 24956

**MF:** C<sub>130</sub>H<sub>208</sub>N<sub>32</sub>O<sub>38</sub>S • XCF<sub>3</sub>COOH

**FW:** 2,859.3

**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—Leu—Phe—Lys—Asn—  
Ala—Ile—Ile—Lys—Asn—Ala—OH  
• XCF<sub>3</sub>COOH

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

### Laboratory Procedures

β-Endorphin (1-26) (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the β-endorphin (1-26) (human) (trifluoroacetate salt) in water. The solubility of β-endorphin (1-26) (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

β-Endorphin (1-26) is a neuropeptide found in rat hippocampus, brain stem, and pituitary.<sup>1</sup> It is also present in the human hypothalamus, where it comprises approximately 13.1% of total β-endorphin.<sup>2</sup> β-endorphin (1-26) is an opioid receptor agonist that inhibits potassium-induced norepinephrine (NE) release in rat cortical slices (IC<sub>50</sub> = 2.5 nM).<sup>3</sup> It reverses inhibition of potassium-induced NE release from rat cortical slices induced by the opioid antagonists naloxone (Item No. 15594), CTOP, norbinaltorphimine (nor-BNI), and naltrindole (Item No. 9000705; pA<sub>2</sub>s = 7.59-8.63). *In vivo*, β-endorphin (1-26) (10 μg, i.c.v.) induces transient bradycardia in anesthetized rats.<sup>4</sup> Intracerebroventricular administration of β-endorphin (1-26) increases the latency to tail withdrawal in response to thermal stimulation in mice with a median antinociceptive dose (AD<sub>50</sub>) of 1.57 μg per animal.<sup>5</sup>

### References

1. Smyth, D.G. and Zakarian, S. β-Endorphin in brain. *Prog. Brain Res.* **55**, 123-132 (1982).
2. Millington, W.R. and Smith, D.L. The posttranslational processing of β-endorphin in human hypothalamus. *J. Neurochem.* **57**(3), 775-781 (1991).
3. Kim, K.W. and Cox, B.M. Inhibition of norepinephrine release from rat cortex slices by opioids: Differences among agonists in sensitivities to antagonists suggest receptor heterogeneity. *J. Pharmacol. Exp. Ther.* **267**(3), 1153-1160 (1993).
4. van Giersbergen, P.L., de Lang, H., and de Jong, W. Effects of dynorphin A(1-13) and of fragments of β-endorphin on blood pressure and heart rate of anesthetized rats. *Can. J. Physiol. Pharmacol.* **69**(3), 327-333 (1991).
5. Li, C.H., Tseng, L.F., and Yamashiro, D. β-Endorphin: Complete primary structure is required for full analgesic activity. *Biochem. Biophys. Res. Commun.* **85**(2), 795-800 (1978).

#### 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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