



LKT Laboratories, Inc.

## Leu-Enkephalin

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### Product Information

Product ID E5240

CAS No. 58822-25-6

**Chemical Name**

H-Tyr-Gly-Gly-Phe-Leu-OH

Synonym 1-5-b-Neoendorphin (human) (9CI)

Formula  $C_{28}H_{37}N_5O_7$

Formula Wt. 555.62

**Melting Point**

Purity  $\geq 95\%$

Solubility Soluble in water (1 mg/mL).

**Bulk quantities available upon request**

Product ID	Size
E5240	25 mg
E5240	50 mg
E5240	125 mg

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

Ship Temp Ambient

**Description**

Leu-enkephalin is an endogenous opioid peptide that acts as an agonist at  $\mu$ -opioid receptors ( $\mu$ ORs) and  $\delta$ -opioid receptors ( $\delta$ ORs). Met-enkephalin exhibits neuromodulatory, antinociceptive/analgesic, and gastrointestinal motility modulating activities. Like other endogenous opioids, leu-enkephalin modulates expression of opioid receptors and plays a role in reward/reinforcement signaling. Leu-enkephalin increases pain thresholds in vivo and inhibits gastrointestinal muscle contractility in other animal models, inhibiting motility and gastric emptying.

**References**

Popov M, Abu Hammad I, Bachar T, et al. Delivery of analgesic peptides to the brain by nano-sized bolaamphiphilic vesicles made of monolayer membranes. *Eur J Pharm Biopharm.* 2013 Nov;85(3 Pt A):381-9. PMID: 23791683.

Crayton R, Soller W, Mattiasson A, et al. Exogenously administered opioids contract the female rat intrinsic urethral sphincter in vivo. *Neurourol Urodyn.* 2010 Jun;29(5):777-82. PMID: 19899147.

Holzer P. Opioid receptors in the gastrointestinal tract. *Regul Pept.* 2009 Jun 5;155(1-3):11-7. PMID: 19345246.

Del Borgo MP, Blanchfield JT, Toth I. Internalisation of the mu-opioid receptor by endomorphin-1 and leu-enkephalin is dependant on aromatic amino acid residues. *Bioorg Med Chem.* 2008 Apr 15;16(8):4341-6. PMID: 18329886.

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