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Produktinformation

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- Diagnostik & molekulare Diagnostik
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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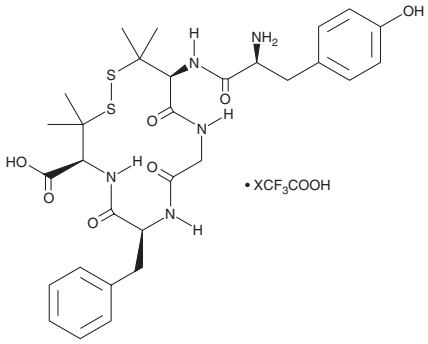
PRODUCT INFORMATION

DPDPE (trifluoroacetate salt)

Item No. 23184



Formal Name:	L-tyrosyl-3-mercapto-D-valylglycyl-L-phenylalanyl-3-mercapto-D-valine, cyclic (2→5)-disulfide, trifluoroacetate salt
Synonym:	[D-Pen^2,D-Pen^5]Enkephalin
MF:	$C_{30}H_{39}N_5O_7S_2 \bullet XCF_3COOH$
FW:	645.8
Purity:	≥95%
Supplied as:	A lyophilized powder
Storage:	-20°C
Stability:	≥2 years

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

Laboratory Procedures

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

Description

DPDPE is a synthetic enkephalin peptide and δ-opioid receptor agonist (K_i = 2.7 nM in rat brain homogenates).[1] DPDPE has greater than 250-fold selectivity for the δ-opioid receptor over the μ- and κ-opioid receptors in rat brain homogenates (K_is = 713 and >1,500 nM, respectively). It also selectively inhibits electrically-evoked contractions in mouse vas deferens over guinea pig myenteric plexus (IC_{50}s = 4.14 and 3,000 nM, respectively), which does not express the δ-opioid receptor. *In vivo*, DPDPE (140 nmol, i.v.) completely blocks tonic hindlimb extension induced by maximal electroshock (MES) in 50% of tested rats and increases the flurothyl-induced seizure threshold by 15-20% in rats, effects that can be blocked by the selective δ-opioid receptor antagonist ICI 154129.[2] DPDPE (1-10 μg, i.v) dose-dependently reduces formalin-induced paw licking and lifting, indicating analgesia, in rats.[3] However, DPDPE (15 μg, i.v.) increases the latency to tail withdrawal in the tail-immersion test in both wild-type and δ-opioid receptor knockout mice by 6.74 and 7.6 seconds, respectively, compared to a saline control, but not in μ-opioid receptor knockout mice, and the effect can be blocked by the μ-opioid receptor antagonist CTOP.[4]

References

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2. Tortella, F.C., Echevarria, E., Robles, L., *et al.* Anticonvulsant effects of mu (DAGO) and delta (DPDPE) enkephalins in rats. *Peptides* **9(5)**, 1177-1181 (1988).
3. Calcagnetti, D.J., Helmstetter, F.J., and Fanselow, M.S. Analgesia produced by centrally administered DAGO, DPDPE and U50488H in the formalin test. *Eur. J. Pharmacol.* **153(1)**, 117-122 (1988).
4. Scherrer, G., Befort, K., Contet, C., *et al.* The delta agonists DPDPE and deltorphin II recruit predominantly mu receptors to produce thermal analgesia: A parallel study of mu, delta and combinatorial opioid receptor knockout mice. *Eur. J. Neurosci.* **19(8)**, 2239-2248 (2004).

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