

## Deltorphin II (trifluoroacetate salt)

## Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.

## Biological Description

Description	Deltorphin II is a peptide agonist of $\delta 2$ -opioid receptors. <sup>1,2</sup> It is selective for $\delta$ -opioid receptors over $\mu$ - and $\kappa$ -opioid receptors in radioligand bindings assays ( $K_{is} = 0.0033$ , $>1$ , and $>1 \mu M$ , respectively) and induces $[35S]GTP\gamma S$ binding in mouse brain membrane preparations ( $EC_{50} = 0.034 \mu M$ ). Deltorphin II (0.12 mg/kg) decreases the infarction zone: risk zone ratio in a rat model of myocardial ischemia-reperfusion injury induced by coronary occlusion, an effect that can be reversed by the $\delta 2$ -opioid receptor antagonist naltriben but not the $\delta 1$ -opioid receptor antagonist BNTX. <sup>3</sup> Intrathecal administration of deltorphin II (15 $\mu g$ /animal) increases latency to withdraw in the paw pressure and tail-flick tests in rats. <sup>4</sup>
Targets(IC50)	Others

## Solubility Information

Solubility	DMF:PBS (pH 7.2) (1:5): 0.16 mg/mL,Sonication is recommended. DMF: 15 mg/mL,Sonication is recommended. DMSO: 1 mg/mL,Sonication is recommended. Ethanol: Slightly soluble ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
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## Reference

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- 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 miceEur. J. Neurosci.19(8)2239-2248(2004)
- Maslov, L.N., Barzakh, E.I., Krylatov, A.V., et al.Opioid peptide deltorphin II simulates the cardioprotective effect of ischemic preconditioning: role of  $\delta 2$ -opioid receptors, protein kinase C, and KATP channelsBull. Exp. Biol. Med.149 (5)591-593(2010)
- Labuz, D., Toth, G., Machelska, H., et al.Antinociceptive effects of isoleucine derivatives of deltorphin I and deltorphin II in rat spinal cord: A search for selectivity of delta receptor subtypesNeuropeptides32(6)511-517(1998)

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