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Produktinformation

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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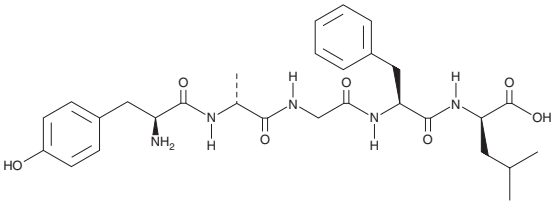
PRODUCT INFORMATION

DADLE

Item No. 28928

CAS Registry No.:	63631-40-3
Formal Name:	L-tyrosyl-D-alanylglycyl-L-phenylalanyl-D-leucine
Synonym:	[D-Ala^2, D-Leu^5]-Enkephalin
MF:	$C_{29}H_{39}N_5O_7$
FW:	569.7
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

DADLE is supplied as a crystalline solid. A stock solution may be made by dissolving the DADLE in the solvent of choice, which should be purged with an inert gas. DADLE is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DADLE in ethanol is approximately 5 mg/ml and is approximately 25 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of DADLE can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of DADLE in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

DADLE is a peptide agonist of δ-opioid receptors (K_i = 2.06 nM in a radioligand binding assay).[1] It is selective for δ-opioid over κ-opioid receptors (K_i = 16,000 nM) but also agonizes μ-opioid receptors (K_i = 13.8 nM). DADLE inhibits electrically induced contractions in guinea pig myenteric plexus and mouse and rat vas deferens (IC_{50}s = 8.9, 0.73, and 134 nM, respectively). It induces analgesia in the tail-flick and hot plate tests in mice (ED_{50}s = 0.03 and 0.027 nmol per animal, i.c.v.).[2] DADLE (2.5 mg/kg) decreases infarct volume in a rat model of cerebral ischemia-reperfusion injury induced by middle cerebral artery occlusion (MCAO).[3]

References

1. Corbett, A.D., Gillan, M.G.C., Kosterlitz, H.W., *et al.* Selectivities of opioid peptide analogues as agonists and antagonists at the δ-receptor. *Br. J. Pharmacol.* **83(1),** 271-279 (1984).
2. Suh, H.H. and Tseng, L.F. Different types of opioid receptors mediating analgesia induced by morphine, DAMGO, DPDPE, DADLE and β-endorphin in mice. *Naunyn Schmiedebergs Arch. Pharmacol.* **342(1),** 67-71 (1990).
3. Lv, M.R., Li, B., Wang, M.G., *et al.* Activation of the PI3K-Akt pathway promotes neuroprotection of the δ-opioid receptor agonist against cerebral ischemia-reperfusion injury in rat models. *Biomed. Pharmacother.* **93,** 230-237 (2017).

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