Morphiceptin

Cat. No.: HY-P1701

CAS No.: 74135-04-9

Molecular Formula: $C_{28}H_{35}N_5O_5$

Molecular Weight: 521.61

Sequence Shortening: YPFP-NH2

Target: Opioid Receptor

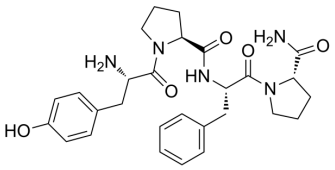
Pathway: GPCR/G Protein; Neuronal Signaling

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : ≥ 250 mg/mL (479.29 mM)

DMSO : 125 mg/mL (239.64 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9171 mL	9.5857 mL	19.1714 mL
	5 mM	0.3834 mL	1.9171 mL	3.8343 mL
	10 mM	0.1917 mL	0.9586 mL	1.9171 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (191.71 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Morphiceptin is a potent and specific agonist for morphine (μ) receptors. Morphiceptin, as a synthetic peptide, is the amide of a fragment of the milk protein β-casein. Morphiceptin has morphinelike activities and is highly specific for morphine (μ)

	receptors but not for enkephalin (δ) receptors[1].
IC_{50} & Target	μ Opioid Receptor/MOR
In Vivo	Morphiceptin potently inhibits the binding of [^{3}H]dihydromorphine, ^{125}I-labeled FK33824, and [^{3}H]naloxone to rat brain membrane preparations with a 50 percent inhibition concentration (IC_{50}) of about 20 nM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Chang KJ, et al. Morphiceptin (NH4-tyr-pro-phe-pro-COHN2): a potent and specific agonist for morphine (mu) receptors. Science. 1981;212(4490):75-77.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA