# Morphiceptin

**Cat. No.:** HY-P1701

**CAS No.:** 74135-04-9

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

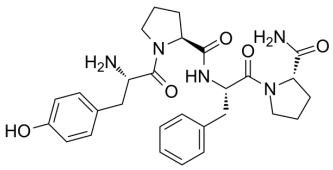
**Molecular Weight:** 521.61

**Sequence Shortening:** YPFP-NH2

**Target:** Others

**Pathway:** Others

**Storage:** Please store the product under the recommended conditions in the Certificate of Analysis.



## 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 | Mass / Solvent / 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: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (3.99 mM); Clear solution
2. 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
3. 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 (⊠) receptors[1].

**$IC_{50}$ & Target**

Morphine (μ) Receptor[1]

| | |
|---|---|
| **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].<br>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.



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