# CP21R7

**Cat. No.:** HY-100207

**CAS No.:** 125314-13-8

**Molecular Formula:** $C_{19}H_{15}N_3O_2$

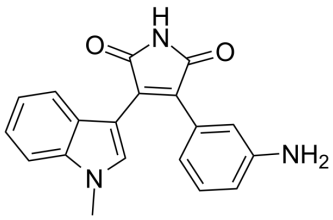
**Molecular Weight:** 317.34

**Target:** GSK-3

**Pathway:** PI3K/Akt/mTOR; Stem Cell/Wnt

**Storage:**

| | | |
|---|---|---|
| Powder | -20°C | 3 years |
| | 4°C | 2 years |
| In solvent | -80°C | 2 years |
| | -20°C | 1 year |




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : ≥ 32 mg/mL (100.84 mM)

* "≥" means soluble, but saturation unknown.

**Preparing Stock Solutions**

| Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|
| 1 mM | 3.1512 mL | 15.7560 mL | 31.5119 mL |
| 5 mM | 0.6302 mL | 3.1512 mL | 6.3024 mL |
| 10 mM | 0.3151 mL | 1.5756 mL | 3.1512 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: ≥ 2.5 mg/mL (7.88 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

CP21R7 is potent GSK-3β inhibitor, with an $IC_{50}$ of 1.8 nM; CP21R7 also shows inhibitory activitiy against PKCα, with an $IC_{50}$ of 1900 nM.

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

| GSK-3β | PKCα |
|---|---|
| 1.8 nM ($IC_{50}$) | 1900 nM ($IC_{50}$) |

**In Vitro**

CP21R7 (Compound 9) is a selective inhibitor of GSK-3β, with an $IC_{50}$ of 1.8 nM; the $IC_{50}$ of CP21R7 against PKCα is 1900 nM[1]. CP21R7 (CP21, 3 μM) potently activates canonical Wnt signaling with highest activity. CP21 significantly increases total levels of intracellular β-catenin. CP21 combined with BMP4 induces commitment of hPSCs towards mesoderm[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Small. 2023 Jan 12;e2207194.
- J Mol Cell Cardiol. 2023 Jan 16;176:21-32.
- J Mol Cell Cardiol. 2021 Oct 16;S0022-2828(21)00197-8.
- STAR Protoc. 2022 Apr 13;3(2):101296.

See more customer validations on www.MedChemExpress.com

## REFERENCES

[1]. Gong L, et al. Discovery of potent and bioavailable GSK-3beta inhibitors. Bioorg Med Chem Lett. 2010 Mar 1;20(5):1693-6.

[2]. Patsch C, et al. Generation of vascular endothelial and smooth muscle cells from human pluripotent stem cells. Nat Cell Biol. 2015 Aug;17(8):994-1003.



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