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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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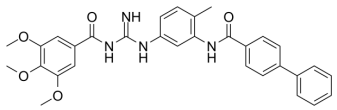
MRT-83

Cat. No.:	HY-18287
CAS No.:	1263131-92-5
Molecular Formula:	$C_{31}H_{30}N_4O_5$
Molecular Weight:	538.59
Target:	Smo
Pathway:	Stem Cell/Wnt
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (464.17 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.8567 mL	9.2835 mL	18.5670 mL
5 mM	0.3713 mL	1.8567 mL	3.7134 mL
10 mM	0.1857 mL	0.9283 mL	1.8567 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 (3.86 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (3.86 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MRT-83 is a potent antagonist of Smo, with an IC_{50} in the nanomolar range. MRT-83 also blocks Hedgehog (Hh) signaling.

IC_{50} & Target

Smo[1].

In Vitro

MRT-83 displays full antagonist properties with an IC_{50} (~3 nM) for inhibiting ShhN (3 nM)-induced proliferation of rat GCPs. MRT-83 also blocks SAG (0.01 μM)-induced proliferation of GCPs (IC_{50} ~6 nM). MRT-83 blocks BC binding to HEK-hSmo cells in a dose-dependent manner with an IC_{50} of 4.6 nM. MRT-83 abrogates BC binding to cells expressing mouse Smo with an IC_{50} of 14 nM, which is in good correlation with its IC_{50} in the Shh-light2 and alkaline phosphatase assays[1].

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

In Vivo	Animals treated with ShhN in the presence of MRT-83 are as healthy as those of the other groups but up-regulation of Ptc transcription in the SVZ of these animals is no longer observed in agreement with a complete inhibition of ShhN-mediated effects (8.7±2.4 Ptc^+ cells/section, n=9) and is not different from vehicle-mediated effects. MRT-83 but not MRT-36 antagonizes the up-regulation of Ptc transcription induced by ShhN in vivo in the SVZ of the LV[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice[1] Four groups of six animals received 5 µL of 45% 2-hydroxypropyl-β-cyclodextrin PBS solution containing 0.9 µg of ShhN alone or in the presence of MRT-83 (200 ng) or MRT-36 (110 ng). A control group receive 5 µL of 45% 2-hydroxypropyl-β-cyclodextrin solution alone. All groups are analyzed 48 h after the injection[1]MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Roudaut H, et al. Identification and mechanism of action of the acylguanidine MRT-83, a novel potent Smoothened antagonist. Mol Pharmacol. 2011 Mar;79(3):453-60.

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