MRT-81

Cat. No.: HY-145387

CAS No.: 1263132-08-6

Molecular Formula: $C_{31}H_{29}N_3O_5S$

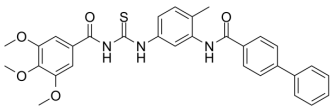
Molecular Weight: 555.64

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 : 100 mg/mL (179.97 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7997 mL	8.9986 mL	17.9973 mL
	5 mM	0.3599 mL	1.7997 mL	3.5995 mL
	10 mM	0.1800 mL	0.8999 mL	1.7997 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.50 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MRT-81 is a potent antagonist of human and rodent smoothened (Smo) receptors, with an IC_{50} value of 41 nM in the Shh-light2 cells. MRT-81 has potent hedgehog inhibiting activity. MRT-81 can be used for the research of cancer[1].

IC_{50} & Target

IC50: 41 nM (Shh-light2 cells Smo receptors)[1]

In Vitro

MRT-81 inbihits the differentiation of the mesenchymal pluripotent C3H10T1/2 cells into alkaline phosphatasepositive osteoblasts induced by the Smo agonist SAG (0.1 μM), with an IC_{50} value of 64 nM[1].

MRT-81 (1-1000 nM) is a potent antagonist of SAG (0.01 μM)-induced proliferation of rat granule cell precursors (GCPs) with an IC_{50} less than 10 nM[1].

MRT-81 (0, 0.1, 1, 10, 30, 100, 300, 1000 nM; 2 h; 37 °C) blocks BODIPY-cyclopamine (5 nM) binding to hSmo in a dose-dependent manner with an IC_{50} of 63 nM in HEK-hSmo cells[1].

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

REFERENCES

[1]. Solinas A, et al. Acylthiourea, acylurea, and acylguanidine derivatives with potent hedgehog inhibiting activity. J Med Chem. 2012 Feb 23;55(4):1559-71.

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

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