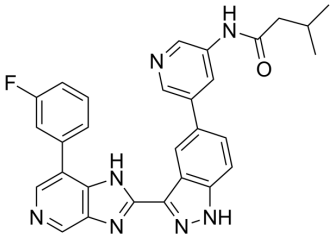
Adavivint

Cat. No.:	HY-109049
CAS No.:	1467093-03-3
Molecular Formula:	$C_{29}H_{24}FN_7O$
Molecular Weight:	505.55
Target:	Wnt
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 : 25 mg/mL (49.45 mM; Need ultrasonic and warming)

H_2O : 1 mg/mL (1.98 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.9780 mL	9.8902 mL	19.7804 mL
	5 mM	0.3956 mL	1.9780 mL	3.9561 mL
	10 mM	0.1978 mL	0.9890 mL	1.9780 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 (4.95 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (4.95 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.95 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Adavivint (SM04690; Lorecivivint) is a potent and selective inhibitor of canonical Wnt signaling, with an EC_{50} of 19.5 nM via a high-throughput TCF/LEF-reporter assay in SW480 colon cancer cells[1].

IC_{50} & Target

EC50: 19.5 nM (Wnt, SW480 cell)[1]

In Vitro

Adavivint (SM04690) is a potent and selective inhibitor of Wnt signaling, with an EC_{50} of 19.5 nM via a high-throughput

	TCF/LEF-reporter assay in SW480 colon cancer cells, and shows no effect on SV40 luciferase reporter. Adavivint enhances aggregation of human mesenchymal stem cells (hMSCs) with an EC_{50} of 10 nM. Adavivint (30 nM) protects chondrocytes from catabolic breakdown in vitro[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Adavivint (0.3 μg) enhances cartilage repair and protection in the rat acute cruciate ligament tear and partial medial meniscectomy osteoarthritis (ACLT + pMMx OA) model[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Med Chem. 2023 Mar 6.
- Cell Oncol. 2022 Oct 21.
- Mol Carcinog. 2022 Oct 12.
- Bone. 2022 Feb 23;116372.
- Osteoarthr Cartil Open. 2023 May 12, 100369.

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REFERENCES

[1]. Deshmukh V, et al. A small-molecule inhibitor of the Wnt pathway (SM04690) as a potential disease modifying agent for the treatment of osteoarthritis of the knee. Osteoarthritis Cartilage. 2018 Jan;26(1):18-27.

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