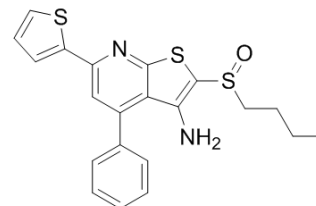


SW033291

Cat. No.:	HY-16968		
CAS No.:	459147-39-8		
Molecular Formula:	C ₂₁ H ₂₀ N ₂ OS ₃		
Molecular Weight:	412.59		
Target:	15-PGDH		
Pathway:	Metabolic Enzyme/Protease		
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 : 50 mg/mL (121.19 mM; Need ultrasonic)
Ethanol : 25 mg/mL (60.59 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4237 mL	12.1186 mL	24.2371 mL
	5 mM	0.4847 mL	2.4237 mL	4.8474 mL
	10 mM	0.2424 mL	1.2119 mL	2.4237 mL

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

In Vivo

- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 2.5 mg/mL (6.06 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: 2.5 mg/mL (6.06 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

SW033291 is a potent and high-affinity inhibitor of 15-PGDH with a K_i of 0.1 nM. SW033291 increases prostaglandin PGE2 levels in bone marrow and other tissues. SW033291 also promotes tissue regeneration^[1].

IC₅₀ & Target

K_i: 0.1 nM (15-PGDH)^[1]

In Vitro

Treating cells with SW033291 decreases cellular 15-PGDH enzyme activity by 85%. SW033291 inhibition of 15-PGDH was non-

competitive versus PGE2 over concentrations up to 40 μ M PGE2. Treatment of A549 cells with SW033291 increases PGE2 levels by 3.5-fold at 500 nM, with an EC₅₀ at approximately 75 nM^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

SW033291 (10 mg/kg; intraperitoneal injection; twice daily; for 3 days; C57BL/6J mice) treatment for three consecutive days shows significant benefits, including a doubling of peripheral neutrophil counts, a 65% increase in marrow SKL cells, and a 71% increase in marrow SLAM cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6J mice ^[1]
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection; twice daily; for 3 days (for 5 doses)
Result:	Showed significant benefits, including a doubling of peripheral neutrophil counts, a 65% increase in marrow SKL cells, and a 71% increase in marrow SLAM cells.

CUSTOMER VALIDATION

- Stem Cell Res Ther. 2020 Feb 21;11(1):76.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Zhang Y, et al. TISSUE REGENERATION. Inhibition of the prostaglandin-degrading enzyme 15-PGDH potentiates tissue regeneration. Science. 2015 Jun 12;348(6240):aaa2340.

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

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