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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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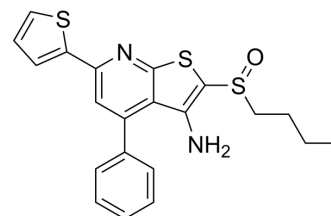
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SW033291

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 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (80.78 mM; ultrasonic and warming and heat to 70°C)
 Ethanol : 25 mg/mL (60.59 mM; Need ultrasonic)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	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% DMSO >> 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 >> 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	<p>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 μM PGE2. Treatment of A549 cells with SW033291 increases PGE2 levels by 3.5-fold at 500 nM, with an EC₅₀ 50 at approximately 75 nM^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>								
In Vivo	<p>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].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table> <tr> <td>Animal Model:</td><td>C57BL/6J mice^[1]</td></tr> <tr> <td>Dosage:</td><td>10 mg/kg</td></tr> <tr> <td>Administration:</td><td>Intraperitoneal injection; twice daily; for 3 days (for 5 doses)</td></tr> <tr> <td>Result:</td><td>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.</td></tr> </table>	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.
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CUSTOMER VALIDATION

- Stem Cell Res Ther. 2020 Feb 21;11(1):76.
- J Invest Dermatol. 2021 Sep 6;S0022-202X(21)02171-0.
- Int J Mol Sci. 2023 Mar 7.
- Bioorg Chem. 2023 Jun 1, 106646.
- Cell Signal. 2023 May 8, 110707.

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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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