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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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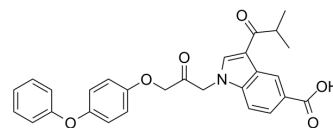
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CAY10650

Cat. No.:	HY-10801		
CAS No.:	1233706-88-1		
Molecular Formula:	C ₂₈ H ₂₅ NO ₆		
Molecular Weight:	471.5		
Target:	Phospholipase		
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 : 100 mg/mL (212.09 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.1209 mL	10.6045 mL	21.2089 mL
	5 mM	0.4242 mL	2.1209 mL	4.2418 mL
	10 mM	0.2121 mL	1.0604 mL	2.1209 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 (5.30 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (5.30 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (5.30 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

CAY10650 is a highly potent cytosolic phospholipase A₂α (cPLA₂α) inhibitor with an IC₅₀ value of 12 nM. CAY10650 suppresses lipid droplets formation and PGE₂ secretion^{[1][2]}.

In Vitro

CAY10650 (12 nM; 30 min; neutrophils) inhibits the expression of the phosphorylated cPLA₂-α (p-cPLA₂-α) in cells^[1].
CAY10650 (12 nM; 2 h; neutrophils) inhibits PGE₂ release in neutrophils^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Western Blot Analysis^[1]

	<table border="1"> <tr> <td>Cell Line:</td> <td>Neutrophils</td> </tr> <tr> <td>Concentration:</td> <td>12 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>30 minutes</td> </tr> <tr> <td>Result:</td> <td>Inhibited cPLA2-α and inhibited the expression of the p-cPLA2-α.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Neutrophils</td> </tr> <tr> <td>Concentration:</td> <td>12 nM</td> </tr> <tr> <td>Incubation Time:</td> <td>2 hours</td> </tr> <tr> <td>Result:</td> <td>Inhibited the PGE₂ secretion and inhibited PGE₂ release.</td> </tr> </table>	Cell Line:	Neutrophils	Concentration:	12 nM	Incubation Time:	30 minutes	Result:	Inhibited cPLA2- α and inhibited the expression of the p-cPLA2- α .	Cell Line:	Neutrophils	Concentration:	12 nM	Incubation Time:	2 hours	Result:	Inhibited the PGE ₂ secretion and inhibited PGE ₂ release.
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In Vivo	<p>CAY10650 (50 μg/5 μL; Inject with topical eye-drop; Chinese hamsters) relieves acanthamoeba keratitis in vivo.^[1] MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>Chinese hamsters with infected with parasite-laden contact lenses^[1]</td> </tr> <tr> <td>Dosage:</td> <td>50 μg/5 μL</td> </tr> <tr> <td>Administration:</td> <td>Inject with topical eye-drop under the contact lens; three times a day for 6 days and topically on days 7 to 20 postinfection</td> </tr> <tr> <td>Result:</td> <td>Reduced the severity of the keratitis and hasten the onset of resolution. Had little mild inflammation and very few PMNs infiltration in the corneal stroma.</td> </tr> </table>	Animal Model:	Chinese hamsters with infected with parasite-laden contact lenses ^[1]	Dosage:	50 μ g/5 μ L	Administration:	Inject with topical eye-drop under the contact lens; three times a day for 6 days and topically on days 7 to 20 postinfection	Result:	Reduced the severity of the keratitis and hasten the onset of resolution. Had little mild inflammation and very few PMNs infiltration in the corneal stroma.								
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CUSTOMER VALIDATION

- Adv Sci (Weinh). 2022 Sep 14;e2203995.
- Exp Mol Med. 2023 Mar 3.
- Mater Today Bio. 2024 Feb, 24, 100919.
- JCI Insight. 2021 Sep 7;151911.
- Korean J Physiol Pharmacol. 2021 Mar 1;25(2):159-166.

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REFERENCES

- [1]. Paloschi MV, et, al. Cytosolic phospholipase A₂- α participates in lipid body formation and PGE₂ release in human neutrophils stimulated with an L-amino acid oxidase from Calloselasma rhodostoma venom. Sci Rep. 2020 Jul 3;10(1):10976.
- [2]. Tripathi T, et, al. Role of phospholipase A₂ (PLA₂) inhibitors in attenuating apoptosis of the corneal epithelial cells and mitigation of Acanthamoeba keratitis. Exp Eye Res. 2013 Aug;113:182-91.

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

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