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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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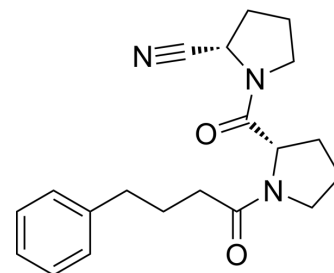
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KYP-2047

Cat. No.:	HY-100475		
CAS No.:	796874-99-2		
Molecular Formula:	C ₂₀ H ₂₅ N ₃ O ₂		
Molecular Weight:	339.43		
Target:	Apoptosis; MDM-2/p53; Prolyl Endopeptidase (PREP)		
Pathway:	Apoptosis; 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 : 100 mg/mL (294.61 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.9461 mL	14.7306 mL	29.4612 mL
		5 mM	0.5892 mL	2.9461 mL	5.8922 mL
10 mM		0.2946 mL	1.4731 mL	2.9461 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (7.37 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (7.37 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (7.37 mM); Clear solution; Need ultrasonic 				

BIOLOGICAL ACTIVITY

Description	KYP-2047 is a potent and BBB-penetrating prolyl-oligopeptidase (POP) inhibitor, with an K _i value of 0.023 nM. KYP-2047 reduces glioblastoma proliferation through angiogenesis and apoptosis modulation ^{[1][2]} .
In Vitro	KYP-2047 (0-100 μM) decreases U-87, U-138 and A-172 cell viability in a concentration-dependent manner ^[2] . KYP-2047 (0-100 μM) increases the pro-apoptotic protein Bax, p53 and caspase-3 expression whereas reduces Bcl-2 expression, and reduced significantly TGF-β expression ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

	<p>Cell Proliferation Assay</p> <table border="1"> <tr> <td>Cell Line:</td> <td>U-87, U-138 and A-172 cell^[2]</td> </tr> <tr> <td>Concentration:</td> <td>0.01 μM, 0.1 μM, 0.5 μM, 1 μM, 10 μM, 30 μM, 50 μM and 100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Decreased U-87, U-138 and A-172 cell viability in a concentration-dependent manner.</td> </tr> </table> <p>Western Blot Analysis</p> <table border="1"> <tr> <td>Cell Line:</td> <td>U-87 cell^[2]</td> </tr> <tr> <td>Concentration:</td> <td>0, 50, 100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 h</td> </tr> <tr> <td>Result:</td> <td>Increased the pro-apoptotic protein Bax, p53 and cleaved-caspase-3 expression, reduced significantly Bcl2 expression, reduced Ang1 and Ang2 expression, and decreased Ki-67 expression.</td> </tr> </table>	Cell Line:	U-87, U-138 and A-172 cell ^[2]	Concentration:	0.01 μ M, 0.1 μ M, 0.5 μ M, 1 μ M, 10 μ M, 30 μ M, 50 μ M and 100 μ M	Incubation Time:	24 h	Result:	Decreased U-87, U-138 and A-172 cell viability in a concentration-dependent manner.	Cell Line:	U-87 cell ^[2]	Concentration:	0, 50, 100 μ M	Incubation Time:	24 h	Result:	Increased the pro-apoptotic protein Bax, p53 and cleaved-caspase-3 expression, reduced significantly Bcl2 expression, reduced Ang1 and Ang2 expression, and decreased Ki-67 expression.
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In Vivo	<p>KYP-2047 (1 or 5 mg/kg, 30 min before daily testing) dose-dependently improved the escape performance (i.e. latency to find the hidden platform and swimming path length) of the young but not the old rats in the water maze^[1].</p> <p>KYP-2047 (9 or 27 μmol/kg; IP; once, 1 or 3 h before decapitation; two daily doses for 10 days) increases neurotensin concentration in the hypothalamus^[1].</p> <p>KYP-2047 (0-5 mg/kg) significantly reduces tumor mass and neutrophil infiltration^[2].</p> <p>KYP-2047 (0-5 mg/kg) significantly reduces vascular endothelial-growth-factor (VEGF), CD34, angiopoietins (Ang) and endothelial-nitric-oxide synthase (eNOS) expression^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>																

REFERENCES

- [1]. Jalkanen AJ, et al. Beneficial effect of prolyl oligopeptidase inhibition on spatial memory in young but not in old scopolamine-treated rats. *Basic Clin Pharmacol Toxicol.* 2007 Feb;100(2):132-8.
- [2]. Scuderi SA, et al. KYP-2047, an Inhibitor of Prolyl-Oligopeptidase, Reduces Glioblastoma Proliferation through Angiogenesis and Apoptosis Modulation. *Cancers (Basel).* 2021 Jul 9;13(14):3444.

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

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