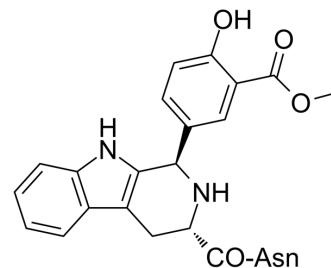


(1R,3S)-THCCA-Asn

Cat. No.:	HY-151146
Molecular Formula:	C ₂₄ H ₂₄ N ₄ O ₆
Molecular Weight:	464.47
Target:	Thrombin
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	(1R,3S)-THCCA-Asn (4j) is a selective thrombin inhibitor with the IC ₅₀ value in the range of 0.07 to 0.14 μM. ((1R,3S)-THCCA-Asn has antithrombotic activity ^[1] .								
In Vitro	<p>(1R,3S)-THCCA-Asn (4j) (0.001-500 μM) has anti-platelet aggregation activity with the IC₅₀ value ranged from 0.07 μM to 0.14 μM, and inhibits ADP-induced platelet aggregation by less than 20% as well as AA-induced platelet aggregation by less than 10%^[1].</p> <p>(1R,3S)-THCCA-Asn (4j) (0.001-1000 μM, 48 h) has less toxic to mammalian cells such as liver cell, colon mucosa cell and human dermal fibroblasts in vitro^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Proliferation Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Liver cell (L02), colon mucosa cell (NCM460) and human dermal fibroblasts cell (NHDF)</td> </tr> <tr> <td>Concentration:</td> <td>0.001-1000 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>48 hours</td> </tr> <tr> <td>Result:</td> <td>Showed that the IC₅₀ values for cell viability were all higher than 125 μM.</td> </tr> </table>	Cell Line:	Liver cell (L02), colon mucosa cell (NCM460) and human dermal fibroblasts cell (NHDF)	Concentration:	0.001-1000 μM	Incubation Time:	48 hours	Result:	Showed that the IC ₅₀ values for cell viability were all higher than 125 μM.
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In Vivo	<p>(1R,3S)-THCCA-Asn (4j) (p.o., 0.001-1 nM/kg) can act against thrombosis of rats in a dose-dependent manner with no toxic side effects^[1].</p> <p>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>Male SD (Sprague Dawley) rats weighing 250-300 g^[1]</td> </tr> <tr> <td>Dosage:</td> <td>0.001, 0.01, 1 nM/kg</td> </tr> <tr> <td>Administration:</td> <td>p.o.</td> </tr> <tr> <td>Result:</td> <td>Resulted in a reduction in thrombus weight of 19.19 mg at the dose of 1 nM/kg compared to the untreated thrombus weight of about 30 mg.</td> </tr> </table>	Animal Model:	Male SD (Sprague Dawley) rats weighing 250-300 g ^[1]	Dosage:	0.001, 0.01, 1 nM/kg	Administration:	p.o.	Result:	Resulted in a reduction in thrombus weight of 19.19 mg at the dose of 1 nM/kg compared to the untreated thrombus weight of about 30 mg.
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REFERENCES

[1]. Xiaoyi Zhang, et al. (1R,3S)-THCCA-Asn: To show the discovery of selective inhibitor of thrombin by successfully combining virtual screening and biological assay,European Journal of Medicinal Chemistry,Volume 242,2022,114681.

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

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