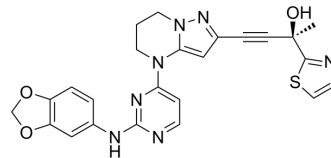


TNIK-IN-9

Cat. No.:	HY-163478
Molecular Formula:	C ₂₄ H ₂₁ N ₇ O ₃ S
Molecular Weight:	487.53
Target:	NF-κB
Pathway:	NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	TNIK-IN-9 (Compound 54) is a selective and potent NIK inhibitor, with an IC ₅₀ of 1.27 nM. TNIK-IN-9 can inhibit pro-inflammatory cytokines and nitric oxide production. TNIK-IN-9 exhibits significant anti-inflammatory effects, improved mortality, and hepatoprotective effects in sepsis models ^[1] .																																			
In Vitro	TNIK-IN-9 (5 μM, 2 h) decreases the levels of inflammatory cytokines and chemokines (TNF-α, IL-6, IL-1β, and CCL12, respectively) in LPS and CD40 induced RAW264.7 cells ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.																																			
In Vivo	<p>TNIK-IN-9 (10 mg/kg, i.p., once time) inhibits the secretion of inflammatory cytokines (TNF-α, IL-1β, CXCL-12, IL-6, IFN-γ) in LPS induced mice^[1].</p> <p>Pharmacokinetic Analysis in C57BL/6J Mouse Model^[1]</p> <table border="1"> <thead> <tr> <th>Route</th> <th>Dose (mg/kg)</th> <th>AUC_{last} (ng·h/mL)</th> <th>AUC_{inf} (ng·h/mL)</th> <th>T_{1/2} (h)</th> <th>C₀ (ng/mL)</th> <th>CL (mL/min/kg)</th> <th>C_{max} (ng/mL)</th> <th>T_{max}(h)</th> </tr> </thead> <tbody> <tr> <td>i.v.</td> <td>10</td> <td>3019</td> <td>3021</td> <td>0.741</td> <td>5059</td> <td>56.2</td> <td>/</td> <td>/</td> </tr> <tr> <td>i.p.</td> <td>10</td> <td>2525</td> <td>2551</td> <td>2.27</td> <td>/</td> <td>/</td> <td>1280</td> <td>0.50</td> </tr> </tbody> </table> <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>LPS induced mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>10 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>i.p., once time</td> </tr> <tr> <td>Result:</td> <td>Decreased the levels of AST, ALT, and AKP. Reduced necrosis and inflammatory cell infiltration. Decreased the p52 protein levels and increased p100 protein levels.</td> </tr> </table>	Route	Dose (mg/kg)	AUC _{last} (ng·h/mL)	AUC _{inf} (ng·h/mL)	T _{1/2} (h)	C ₀ (ng/mL)	CL (mL/min/kg)	C _{max} (ng/mL)	T _{max} (h)	i.v.	10	3019	3021	0.741	5059	56.2	/	/	i.p.	10	2525	2551	2.27	/	/	1280	0.50	Animal Model:	LPS induced mice ^[1]	Dosage:	10 mg/kg	Administration:	i.p., once time	Result:	Decreased the levels of AST, ALT, and AKP. Reduced necrosis and inflammatory cell infiltration. Decreased the p52 protein levels and increased p100 protein levels.
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REFERENCES

[1]. Zhang N, et al. Design, Synthesis, and Biological Evaluation of a Novel NIK Inhibitor with Anti-Inflammatory and Hepatoprotective Effects for Sepsis Treatment. J Med Chem. 2024 Apr 11;67(7):5617-5641.

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

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