

Keap1-Nrf2-IN-20

Cat. No.:	HY-158055
Molecular Formula:	C ₄₂ H ₆₇ N ₁₁ O ₁₉
Molecular Weight:	1030.04
Target:	Keap1-Nrf2
Pathway:	NF-κB
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	Keap1-Nrf2-IN-20 (Compound ZC9) is an inhibitor for Keap-Nrf2 pathway with K _{D2} of 51 nM. Keap1-Nrf2-IN-20 exhibits good cell permeability, cell activity, and metabolic stability (serum t _{1/2} > 24 h) ^[1] .								
In Vitro	Keap1-Nrf2-IN-20 (15-60 μM) inhibits expressions of TNF-α and IL-6 in LPS (HY-D1056)-induced inflammation in mouse peritoneal macrophages, exhibits anti-inflammatory efficacy ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
In Vivo	Keap1-Nrf2-IN-20 (20-80 mg/kg, tail vein injection, single dose) attenuates LPS-induced acute lung injury in C57BL/6 mice model ^[1] . Keap1-Nrf2-IN-20 (56 mg/kg, iv, single dose) exhibits a satisfactory pharmacokinetic profiles in Sprague Dawley rats, the half time (T _{1/2}), clearance rate (CL), area under curve (AUC) and apparent distribution volume (V) are 0.22 h, 3.90 L/h/kg, 14344.57 h·ng/mL and 1.26 L/kg, respectively ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.								
	<table border="1"> <tr> <td>Animal Model:</td> <td>LPS-induced acute lung injury in C57BL/6 mice model^[1]</td> </tr> <tr> <td>Dosage:</td> <td>20-80 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>tail vein injection, single dose</td> </tr> <tr> <td>Result:</td> <td>Maintained intact alveolar structure, reduced inflammatory cell infiltration, bleeding points or congestion.</td> </tr> </table>	Animal Model:	LPS-induced acute lung injury in C57BL/6 mice model ^[1]	Dosage:	20-80 mg/kg	Administration:	tail vein injection, single dose	Result:	Maintained intact alveolar structure, reduced inflammatory cell infiltration, bleeding points or congestion.
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REFERENCES

[1]. Zou J, et al., Cyclic Peptide Keap1-Nrf2 Protein-Protein Interaction Inhibitors: Design, Synthesis, and In Vivo Treatment of Acute Lung Injury. J Med Chem. 2024 Mar 28;67(6):4889-4903.

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

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