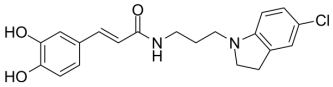
Anti-inflammatory agent 64

Cat. No.:	HY-155405
CAS No.:	3016401-76-3
Molecular Formula:	$C_{20}H_{21}ClN_2O_3$
Molecular Weight:	372.85
Target:	ROS Kinase; Interleukin Related
Pathway:	Protein Tyrosine Kinase/RTK; Immunology/Inflammation
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Anti-inflammatory agent 64 (compound 4b) inhibits the secretion of IL-6 and TNF-α. Anti-inflammatory agent 64 has antioxidant and anti-inflammatory activity in vitro and in vivo. Anti-inflammatory agent 64 can effectively reduce paw edema [1].

In Vitro

Anti-inflammatory agent 64 (2 μM, 4 h) can significantly protect cells and promote cell proliferation in RAW264.7 cells stimulated by H_2O_2 (0.4 mM[1].
Anti-inflammatory agent 64 (2 μM, 24 h) inhibits the production of NO (IC_{50}=0.9 μM) in RAW264.7 cells stimulated by LPS (1 μg/mL) and has anti-inflammatory effect[1].
Anti-inflammatory agent 64 (0.125-2 μM, 4-24 h) significantly reduces the protein level of ROS and enhances HO-1 protein level in RAW264.7 cells stimulated by Rot (5 μM) and LPS (1 μM/mL) and has antioxidant effect[1].
Anti-inflammatory agent 64 (0.5-2 μM, 24 h) can restrain IL–6 in dose dependent manner (IC_{50}=1.73 μM) and TNF-α (IC_{50}=1.52 μM)[1].
Anti-inflammatory agent 64 (0.5-2 μM) can inhibit the expresstion of iNOS protein[1].
Anti-inflammatory agent 64 (0.5-2 μM) inhibits the avtivition of NF-κB pathway by inhibiting the degradation and phosphorylation of IκBα in RAW264.7 cells stimulated by LPS (1 μg/mL)[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	RAW264.7
Concentration:	2 μM
Incubation Time:	4 h
Result:	Could effectively protect the cells treated with LPS, and the cell survival rate is 85%. Could effectively inhibit inflammatory factors ON and had anti-inflammatory properties.

In Vivo

Anti-inflammatory agent 64 (1-30 mg/kg, i.p., i.g., single dose) has anti-inflammatory and antioxidant activity in carrageenan (Cg) (HY-125474) induced paw edema model [1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Cg-induced mouse paw edema model[1]

Dosage:	1 mg/kg, 10 mg/kg, 30 mg/kg
Administration:	Intraperitoneal injection (i.p.) and intragastrica (i.g.), single dose
Result:	Could significantly inhibit plantar edema Reduced the expression level of iNOS. Decreased the level of oxidation marker MAD and increased the activity of antioxidant enzyme SOD. Increased HO-1 expression in a dose-dependent manner.

REFERENCES

[1]. Liu Y, et al. Synthesis of cinnamoyl tethered indoline derivatives with anti-inflammatory and antioxidant activities[J]. European Journal of Medicinal Chemistry, 2023: 115936.

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