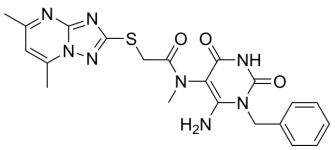
Anti-inflammatory agent 49

Cat. No.:	HY-155656
CAS No.:	851471-44-8
Molecular Formula:	$C_{21}H_{22}N_8O_3S$
Molecular Weight:	466.52
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	nti-inflammatory agent 49 (compound SC9) is a quite potent and selective inhibitor of Drp1-Fis1 interaction and can reduce FIS1-mediated mitochondrial dysfunction. The IC_{50} of SC9 inhibiting GTPase in vitro is 270 nM[1].
IC_{50} & Target	IC50: 270 nM (dynamin-related protein 1 ,Drp1)[1]
In Vitro	1.Anti-inflammatory agent 49 can reduce the mitochondrial dysfunction of H9c2 cells induced by LPS (HY-D1056) and save the mice endotoxemia induced by LPS[1]. 2.Anti-inflammatory agent 49 inhibits Drp1 association with the mitochondria and Drp1-Fis1 interaction following LPS treatment[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay

Cell Line:	H9c2 cells[1]
Concentration:	2 μM
Incubation Time:	16 h
Result:	Decreased the percentage of cells with fragmented mitochondria. The percent of fragmented cells was decreased from 22% (LPS + Veh) to 9% (LPS + SC9), relative to 4% in the absence of LPS[1].

Western Blot Analysis

Cell Line:	H9c2 cells[1]
Concentration:	2 μM
Incubation Time:	24 h
Result:	Decreased the number of high Drp1-Fis1 cells from 67% (LPS + Veh) to 28% (LPS + P110) and to 14% (LPS + SC9).[1]

In Vivo	Anti-inflammatory agent 49 (10 mg/kg, every 8 h for 72 h) rescues mice from LPS-induced endotoxemia[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c AnNCrl micee (Strain Code 028)[1]
Dosage:	LPS doses 10–16.67 mg/kg, SC9 doses 10 mg/kg(after 4 h)
Administration:	Intraperitoneal injection: 0.2 mL of LPS,0.1 mL of CS9; scored every 8 h for 72 h.
Result:	Improved mouse survival at all LPS doses tested at the different LPS doses (10 to 16.6 mg/kg) . Dramatically reduced the occurrence of critical symptoms such as respiratory distress.

REFERENCES

[1]. Luis Rios, et al. Targeting an allosteric site in dynaminrelated protein 1 to inhibit Fis1-mediated mitochondrial dysfunction. Nat Commun. 2023 Jul 19;14(1):4356

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