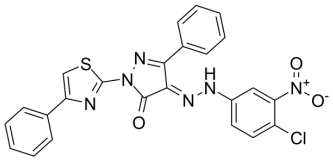
C 87

Cat. No.:	HY-100735
CAS No.:	332420-90-3
Molecular Formula:	$C_{24}H_{15}ClN_6O_3S$
Molecular Weight:	502.93
Target:	TNF Receptor
Pathway:	Apoptosis
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5.05 mg/mL (10.04 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.9883 mL	9.9417 mL	19.8835 mL
5 mM	0.3977 mL	1.9883 mL	3.9767 mL
10 mM	0.1988 mL	0.9942 mL	1.9883 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

C 87 is a novel small-molecule TNFα inhibitor; potently inhibits TNFα-induced cytotoxicity with an IC_{50} of 8.73 μM.

IC_{50} & Target

IC50: 8.73 μM (TNFα-induced cytotoxicity)[1]

In Vitro

C 87 (C87) directly binds to TNFα, potently inhibits TNFα-induced cytotoxicity (IC_{50}=8.73 μM) and effectively blocks TNFα-triggered signaling activities. C 87 exhibits good solubility and consistent dose-dependent functions in vitro. C 87 completely blocks TNFα-induced activation of caspase-3 and caspase-8. The activity of c-Jun N-terminal kinase (JNK) is significantly reduced by C 87 in L929 cells. C 87 also prevents the degradation of IκBα in cells treated with TNFα. C 87 potently blocks multiple signaling transduction pathways and downstream target gene activation triggered by TNFα[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

C 87 (C87) attenuates TNFα-induced inflammation, thereby markedly reducing injuries to the liver and improving animal survival. C 87 injection delays the incidence of death and increases the survival rate by two folds compared with the vehicle control. The level of alanine transaminase and aspartate transaminase is consistently reduced in mice with C 87 treatment[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	The inhibition of the cytotoxic effect of human TNFα by compounds (C 87) is measured in L929 cell line. L929 cells are seeded at a density of 10^4 cells/well in a 96-well plate and incubated for 24 h in RPMI 1640 with 10% FBS at 37°C. Compounds (C 87) are added to the cells with 1 μg/mL actinomycin D and 1 ng/mL TNFα and then incubated at 37 °C for 20 h before analysis. Cell survival is measured using the MTT method[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [1]	BALB/c mice are used in the study. Before LPS/GalN challenge (LPS (50 μg/kg) and D-GalN (1.2g/kg)), mice are injected intraperitoneally with C 87 (12.5 mg/kg), Enbrel (4 mg/kg), or vehicle, respectively, at 1, 8, and 16 h. Blood is collected with retro-orbital sampling. Activities of alanine transaminase and aspartate transaminase are detected. Liver tissues are collected and fixed in 10% formalin, and sections are stained with hematoxylin and eosin[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Eur J Immunol. 2020 Jun;50(6):795-808.
- J Immunol. 2021 May 17;ji2001346.

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REFERENCES

[1]. Ma L, et al. A novel small-molecule tumor necrosis factor α inhibitor attenuates inflammation in a hepatitis mouse model. J Biol Chem. 2014 May 2;289(18):12457-66.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA