NLRP3/AIM2-IN-3

Cat. No.: HY-144226

CAS No.: 1787787-60-3

Molecular Formula: $C_{16}H_{14}N_2O_2$

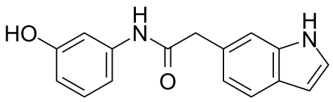
Molecular Weight: 266.29

Target: NOD-like Receptor (NLR); AIM2; Pyroptosis

Pathway: Immunology/Inflammation; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (938.83 mM; Need ultrasonic)
Methanol : 50 mg/mL (187.77 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.7553 mL	18.7765 mL	37.5530 mL
5 mM	0.7511 mL	3.7553 mL	7.5106 mL
10 mM	0.3755 mL	1.8777 mL	3.7553 mL

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

BIOLOGICAL ACTIVITY

Description

NLRP3/AIM2-IN-3 (compound 59) is a potent inhibitor with differential species specific effects against NLRP3 and AIM2 inflammasome-dependent pyroptosis. NLRP3/AIM2-IN-3 shows inhibitory efficacy against pyroptosis in THP-1 macrophages stimulated with LPS/nigericin, with an IC_{50} of 0.077 ± 0.008 μM. NLRP3/AIM2-IN-3 disturbs the interaction of NLRP3 or AIM2 with the adaptor protein ASC and inhibited ASC oligomerization[1].

IC_{50} & Target

NLRP3

In Vitro

NLRP3/AIM2-IN-3 (0-100 μM) displays remarkable inhibitory activity against NLRP3-and AIM2-but not NLRC4-dependent activation of caspase-1 and the release of IL-1b in human THP-1 macrophages[1].
NLRP3/AIM2-IN-3 shows inhibition of IL-1b secretion by human THP-1 macrophages, with IC_{50} of 0.098 μM, which is nearly 150-fold and 500-fold more potent than that of J774A.1 (14.62 μM) and bone marrow-derived macrophages (BMDMs) (48.98 μM), respectively[1].
NLRP3/AIM2-IN-3 has almost no inhibitory effect on the AIM2 inflammasome-dependent activation of caspase-1 and release of IL-1b in J774A.1 cells[1].

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

REFERENCES

[1]. Jiao Y, et al. Discovery of a novel and potent inhibitor with differential species-specific effects against NLRP3 and AIM2 inflammasome-dependent pyroptosis. Eur J Med Chem. 2022 Feb 11;232:114194.

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