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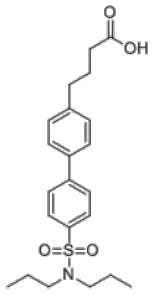
Data Sheet

Global Supplier of Chemical Probes, Inhibitors & Agonists.

Product Name	:	ADS032
Cat. No.	:	PC-20956
CAS No.	:	2757333-37-0
Molecular Formula	:	$C_{22}H_{29}NO_4S$
Molecular Weight	:	403.54
Target	:	NOD-like Receptor (NLR)
Solubility	:	10 mM in DMSO



CAS: 2757333-37-0

Biological Activity

ADS032 (ADS-032) is the first, reversible and stable dual **NLRP1** and **NLRP3** inflammasome inhibitor, inhibits nigericin-induced NLRP3-induced IL-1β secretion from LPS-primed iBMDMs with IC50 of 30 uM.
ADS032 inhibits ionophore- (nigericin) and crystalline- (silica) induced IL-1β and LDH secretion from LPS-primed iBMDMs, respectively, with no effect on LPS-induced TNF-α production.
ADS032 dose dependently inhibits IL-1β secretion induced by the NLRP1 agonist L18-MDP, but MCC950 has no effect.
ADS032 reduces L18-MDP-induced IL-1β secretion in both WT and NLRP3-deficient macrophages in a dose-dependent manner.
ADS032 directly interacts proximal to the Walker B motif within the NACHT domain of both NLRP1 and NLRP3, thus inhibiting inflammasome activation and formation of each inflammasome complex.
ADS032 (20-350 uM) dose dependently reduces NLPR3-induced ASC oligomerisation.
ADS032 effectively inhibits NLRP1 and NLRP3 inflammasome activity in human macrophages and bronchial epithelial cells.
ADS032 (200 mg /kg, methylcellulose, i.p.) inhibits NLRP3 in vivo and reduces acute silicosis-associated pulmonary inflammation in vivo.

References

Docherty CA, et al. ***Clin Transl Immunology.*** 2023 Jun 22;12(6):e1455.

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