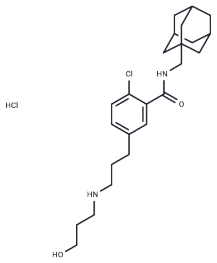
Data Sheet (Cat.No.T14385)

TargetMol

AZD9056 hydrochloride

Chemical Properties



CAS No. : 345303-91-5

Formula: C24H36Cl2N2O2

Molecular Weight: 455.46

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	AZD9056 hydrochloride is a P2X7 inhibitor,Which plays a significant role in pain-causing diseases and inflammation.
Targets(IC50)	P2X Receptor
In vitro	The antagonist AZD9056 blocks P2X7 receptors with an IC50 of 11.2 nM in the HEK-hP2X7 cell line, indicating high selectivity for the receptor. Additionally, AZD9056 exhibits a clear inhibitory effect (IC50=1-3 μM) in mouse microglia BV2 cells[1].
In vivo	Treatment with AZD9056 demonstrates analgesic and anti-inflammatory properties by reversing the MIA-induced upregulation of interleukin (IL)-1β, IL-6, tumor necrosis factor-α (TNF-α), matrix metalloproteinase-13 (MMP-13), substance P (SP), and prostaglandin E2 (PGE2) in cartilage tissues.

Solubility Information

Solubility	DMSO: 48 mg/mL (105.39 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1956 mL	10.9779 mL	21.9558 mL
5 mM	0.4391 mL	2.1956 mL	4.3912 mL
10 mM	0.2196 mL	1.0978 mL	2.1956 mL
50 mM	0.0439 mL	0.2196 mL	0.4391 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Seeland S, et al. ATP-induced cellular stress and mitochondrial toxicity in cells expressing purinergic P2X7 receptor. Pharmacol Res Perspect. 2015 Mar;3(2):e00123.
Elsby R, et al. In vitro risk assessment of AZD9056 perpetrating a transporter-mediated drug-drug interaction with methotrexate. Eur J Pharm Sci. 2011 May 18;43(1-2):41-9.
Hu H, et al. Blocking of the P2X7 receptor inhibits the activation of the MMP-13 and NF-κB pathways in the cartilage tissue of rats with osteoarthritis. Int J Mol Med. 2016 Dec;38(6):1922-1932.

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