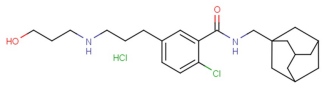
Data Sheet (Cat.No.T14385)

TargetMol
A DRUG SCREENING EXPERT

AZD9056 hydrochloride

Chemical Properties



CAS No.:	345303-91-5
Formula:	C24H36Cl2N2O2
Molecular Weight:	455.46
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	AZD9056 hydrochloride is a selective orally active P2X7 inhibitor .
Targets(IC_{50})	Others: None
In vitro	AZD9056 is an inhibitor of BCRP and weakly inhibits BCRP-mediated transport of methotrexate (IC50=92 μM) [2]. The P2X7-receptor antagonist AZD9056 has a clear inhibitory effect (IC50=1-3 μM) in mouse microglia BV2 cells[1]. The antagonist AZD9056 blocks P2X7 receptors with an IC50 of 11.2 nM in HEK-hP2X7 cell line, indicating a high selectivity of the antagonist for the P2X7 receptor.
In vivo	Treatment with AZD9056 exerts pain-relieving and anti-inflammatory effects. The upregulated expression of interleukin (IL)-1β, IL-6, tumor necrosis factor-α (TNF-α), matrix metalloproteinase-13 (MMP-13), substance P (SP) and prostaglandin E2 (PGE2) which is induced by MIA in cartilage tissues is reversed by AZD9056[3].

Solubility Information

Solubility	DMSO: 34 mg/mL (74.65 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.196 mL	10.978 mL	21.956 mL
5 mM	0.439 mL	2.196 mL	4.391 mL
10 mM	0.22 mL	1.098 mL	2.196 mL
50 mM	0.044 mL	0.22 mL	0.439 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. 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.

2. 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.

3. 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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