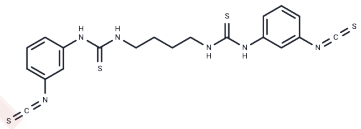
Data Sheet (Cat.No.T6172)

TargetMol

MRS 2578

Chemical Properties



CAS No. : 711019-86-2

Formula: C20H20N6S4

Molecular Weight: 472.67

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	MRS2578, an effective P2Y6 receptor antagonist with IC50 of 37 nM, shows insignificant inhibition at P2Y1, P2Y2, P2Y4, and P2Y11 receptors.
Targets(IC50)	Apoptosis,P2Y Receptor
In vitro	MRS2578 selectively blocks P2Y6 receptor activity versus activity at P2Y1, P2Y2, P2Y4 or P2Y11 receptors. MRS2578 (1 μM) completely blocks the protection by UDP undergoing TNFalpha-induced apoptosis in 1321N1 astrocytoma cells. [1] MRS 2578 inhibits basal NF-κB activity in time and dose dependent manner in HMEC-1 cells transfected with 0.25 μg NF-κB promoter reporter. MRS 2578 (10 μM) completely abolishes TNF-α induced NF-κB reporter activity in HMEC-1 cells. MRS 2578 (10 μM) significant reduces TNF-α-induced proinflammatory gene expression in HMEC-1 cells. [2] MRS 2578 potentiates ATPγS and UDP response at concentrations below 316 nM whereas above this concentration, MRS 2578 inhibits ATPS- and UDP-induced IP accumulation in neonatal rat cardiac myofibroblasts. [3] MRS2578-treated mice shows reduced bronchial hyperresponsiveness toward methacholine in OVA-sensitized mice. MRS2578 completely blocks UDP-induced the release of IL-6, KC, and IL-8 in lung epithelial cells. [4]
In vivo	MRS 2578 (10 μM) attenuates Keratinocyte-derived chemokine serum protein levels in LPS-induced vascular inflammation in C57BL/6 mice. [2] MRS2578 (10 μM, intratracheally) reduces BALF eosinophilia and the levels of IL-5 and IL-13 in the BALF in OVA-sensitized mice and leads to a markedly attenuated change in methacholine responsiveness after OVA challenge. MRS2578 (10 μM, intratracheally) inhibits house dust mite-induced allergic airway inflammation in OVA-sensitized mice. MRS2578 (10 μM, intratracheally) reduces of IL-6 and KC levels in BALF in OVA-sensitized mice. [4]

Solubility Information

Solubility	DMSO: 23.6 mg/mL (49.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.23 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1156 mL	10.5782 mL	21.1564 mL
5 mM	0.4231 mL	2.1156 mL	4.2313 mL
10 mM	0.2116 mL	1.0578 mL	2.1156 mL
50 mM	0.0423 mL	0.2116 mL	0.4231 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Mamedova LK, et al. Biochem Pharmacol, 2004, 67(9), 1763-1770.
Riegel AK, et al. Blood, 2011, 117(8), 2548-2555.
Talasila A, et al. Br J Pharmacol, 2009, 158(1), 339-353.
Vieira RP, et al. Am J Respir Crit Care Med, 2011, 184(2), 215-223.