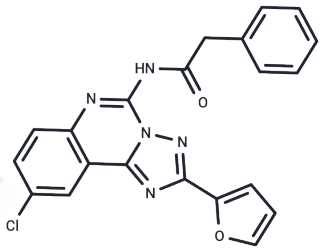
Data Sheet (Cat.No.T23016)

MRS1220

Chemical Properties



CAS No. :	183721-15-5
Formula:	C21H14ClN5O2
Molecular Weight:	403.82
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	MRS1220, a selective and potent antagonist for the human A3 adenosine receptor (hA3AR) with a dissociation constant (Ki) of 0.59 nM, exhibits therapeutic promise for central nervous system disease research. It effectively diminishes glioblastoma tumor size and inhibits blood vessel formation in vivo.
Targets(IC50)	Adenosine Receptor
In vitro	MRS 1220 reverses the A3 agonist-induced inhibition of tumor necrosis factor-α formation in the human macrophage U-937 cell line with an IC50 of 0.3 μM[1], and decreases VEGF secretion by approximately 25% in U87MG glioblastoma stem-like cells (GSCs) after 72 hours of hypoxia[2].
In vivo	MRS1220 (0.15 mg/kg; intraperitoneal inoculation) significantly reduces tumor size and blood vessel formation in vivo, exhibiting a strong anti-angiogenic effect[2].

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4764 mL	12.3818 mL	24.7635 mL
5 mM	0.4953 mL	2.4764 mL	4.9527 mL
10 mM	0.2476 mL	1.2382 mL	2.4764 mL
50 mM	0.0495 mL	0.2476 mL	0.4953 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

K A Jacobson, et al. Pharmacological characterization of novel A3 adenosine receptor-selective antagonists. Neuropharmacology. 1997 Sep;36(9):1157-65.

René Rocha, et al. The Adenosine A_3 Receptor Regulates Differentiation of Glioblastoma Stem-Like Cells to Endothelial Cells under Hypoxia. Int J Mol Sci. 2018 Apr 18;19(4):1228.