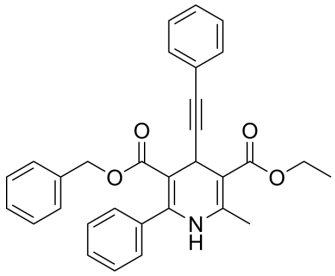
MRS-1191

Cat. No.:	HY-124543
CAS No.:	185222-90-6
Molecular Formula:	$C_{31}H_{27}NO_4$
Molecular Weight:	477.55
Target:	Adenosine Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (523.51 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.0940 mL	10.4701 mL	20.9402 mL
	5 mM	0.4188 mL	2.0940 mL	4.1880 mL
	10 mM	0.2094 mL	1.0470 mL	2.0940 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.36 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MRS-1191 is a potent and selective A_3 adenosine receptor antagonist with a K_B value of 92 nM, a K_i value of 31.4 nM for human A_3 receptor and an IC_{50} of 120 nM for CHO cells[1]. MRS-1191 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.

IC_{50} & Target

Ki: 31.4 nM (human A_3 adenosine receptor)[1]

In Vitro

The effects of putative A_3 adenosine receptor antagonist of MRS-1191 is characterized in receptor binding and functional assays. MRS-1191 is found to be competitive in saturation binding studies using the agonist radioligand [^{125}I]AB-MECA (N^6-(4-amino-3-iodobenzyl)adenosine-5'-N-methyluronamide) at cloned human brain A_3 receptor expressed in HEK-293 cells. Antagonism is demonstrated in functional assays consisting of agonist-induced inhibition of adenylate cyclase and the stimulation of binding of [^{35}S]guanosine 5'-O-(3-thiotriphosphate) ([^{35}S]GTP-gamma-S) to the associated G-proteins. MRS-1191 with a K_B value of 92 nM, proves to be highly selective for human A_3 receptor vs human A_1 receptor-mediated effects on

adenylate cyclase[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2023 Oct 28;14(10):706.
- Purinergic Signal. 2021 Oct 28.

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REFERENCES

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

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