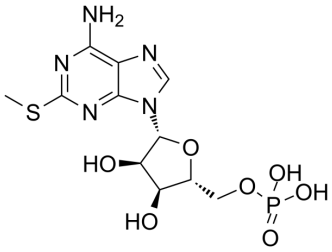
2-Methylthio-AMP

Cat. No.:	HY-125989
CAS No.:	22140-20-1
Molecular Formula:	$C_{11}H_{16}N_5O_7PS$
Molecular Weight:	393.31
Target:	P2Y Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (254.25 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5425 mL	12.7126 mL	25.4252 mL
	5 mM	0.5085 mL	2.5425 mL	5.0850 mL
	10 mM	0.2543 mL	1.2713 mL	2.5425 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.36 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

2-Methylthio-AMP (2-MeSAMP) is a selective and direct $P2Y_{12}$ antagonist. 2-Methylthio-AMP is an inhibitor of ADP-dependent platelet aggregation[1][2][3].

IC_{50} & Target

P2Y12[1]

In Vitro

2-Methylthio-AMP (2-MeSAMP) inhibits agonist-mediated $\alpha_{IIb}\beta_3$ activation in platelets[1].
2-methylthio-AMP (50 μM; for 5 minutes) does not significantly inhibit thrombin, PAR1-AP, PAR4-AP, or ADP-mediated

platelet Ca^{2+} mobilization. 2-methylthio-AMP fails to inhibit Ca^{2+} mobilization in $P2Y_{12}$-deficient mouse platelets and does not raise cAMP or induce vasodilator-stimulated phosphoprotein phosphorylation in wild-type platelets[1].

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

REFERENCES

[1]. John H Cleator, et al. Racial differences in resistance to P2Y12 receptor antagonists in type 2 diabetic subjects. J Pharmacol Exp Ther. 2014 Oct;351(1):33-43.

[2]. Bernhard H Rauch, et al. Regulation of functionally active P2Y12 ADP receptors by thrombin in human smooth muscle cells and the presence of P2Y12 in carotid artery lesions. Arterioscler Thromb Vasc Biol. 2010 Dec;30(12):2434-42.

[3]. A Malinin, et al. Validation of a VerifyNow-P2Y12 cartridge for monitoring platelet inhibition with clopidogrel. Methods Find Exp Clin Pharmacol. 2006 Jun;28(5):315-22.

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