

PSB-603

Chemical Properties

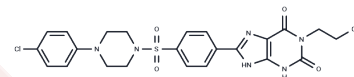
CAS No. : 1092351-10-4

Formula: C₂₄H₂₅ClN₆O₄S

Molecular Weight: 529.01

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	PSB-603 is a selective antagonist of Adenosine A2B receptor(Ki = 0.553 nM) with anti-inflammatory effects.
Targets(IC50)	Adenosine Receptor
In vitro	In peripheral T cells, PSB-603 (100 nM) inhibits NECA-stimulated IL-6 release about 3-fold[2]. PSB-603 (10 μM) shows no affinity for the human and rat A1 and A2A and human A3 receptors[4].
In vivo	PSB-603 (5 mg/kg; i.p.) significantly reduces inflammation in local and systemic mice models of inflammation. In the inflamed paw, PSB-603 significantly decreases the levels of the inflammatory cytokines including IL-6, TNF-α and of ROS. PSB-603 reduces inflammation of the peritoneum by decreasing the infiltration of leukocytes[3].

Solubility Information

Solubility	DMSO: 23.9 mg/mL (45.18 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8903 mL	9.4516 mL	18.9032 mL
5 mM	0.3781 mL	1.8903 mL	3.7806 mL
10 mM	0.189 mL	0.9452 mL	1.8903 mL
50 mM	0.0378 mL	0.189 mL	0.3781 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

Mohamad Wessam Alnouri, et al. Selectivity is species-dependent: Characterization of standard agonists and antagonists at human, rat, and mouse adenosine receptors. *Purinergic Signal*. 2015 Sep;11(3):389-407.

Nadine Borg, et al. CD73 on T Cells Orchestrates Cardiac Wound Healing After Myocardial Infarction by Purinergic Metabolic Reprogramming. *Circulation*. 2017 Jul 18;136(3):297-313.

Magdalena Kotańska, et al. PSB 603 - a known selective adenosine A2B receptor antagonist-has anti-inflammatory activity in mice. *Biomed Pharmacother*. 2021 Mar;135:111164.

Thomas Borrmann, et al. 1-alkyl-8-(piperazine-1-sulfonyl)phenylxanthines: development and characterization of adenosine A2B receptor antagonists and a new radioligand with subnanomolar affinity and subtype specificity. *J Med Chem*. 2009 Jul 9;52

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