Data Sheet (Cat.No.T61099)

TargetMol

Mycophenolic acid sodium

Chemical Properties

CAS No. : 37415-62-6

Formula: C17H19NaO6

Molecular Weight: 342.32

Storage: Keep away from moisture,
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	Mycophenolic acid sodium is a potent uncompetitive inhibitor of inosine monophosphate dehydrogenase (IMPDH), exhibiting an EC50 value of 0.24 μM. Mycophenolic acid sodium demonstrates broad antiviral activity against RNA viruses, including influenza. Mycophenolic acid sodium additionally exhibits immunosuppressive, antiangiogenic, and antitumor activities. Mycophenolic acid sodium is widely utilized in virology, immunology, angiogenesis, and cancer biology research involving nucleotide biosynthesis regulation.
Targets(IC50)	Others
In vitro	Mycophenolic acid sodium has been demonstrated to possess antiviral properties against an array of RNA viruses, including influenza, dengue virus, Zika virus, rotavirus, CCHFV, and hantavirus [1]. Mycophenolic acid sodium (0.01-1 μM, 72 h) displays a selective inhibitory effect on the proliferation of endothelial cells and fibroblasts, with endothelial cells being more susceptible (IC 50 <500 nM) to its antimitotic effects [2]. In contrast, fibroblasts showed a higher tolerance (IC 50 1 μM). Among human tumor cell lines tested, A549 non-small cell lung cancer and PC3 prostate cancer cells manifested moderate sensitivity (IC 50 >1 μM), whereas U87 glioblastoma cells were resistant to up to 1 μM of mycophenolic acid sodium treatment [2]. Mycophenolic acid sodium (0.05-2 μM, 18 h) up-regulates NDRG1 while exhibits a down-regulation of HDAC2 and MYC in a dose-dependent[2].
In vivo	Mycophenolic acid sodium (120 mg/kg; oral gavage; b.i.d.) exhibits potent anti-tumor activity by altering the tumor microenvironment and significantly inhibiting U87 tumor growth in BALB/c nude mice [2]. Using an athymic 8-week-old, 20 g BALB/c nu/nu mouse model with a Mycophenolic acid-resistant U87 tumor, 120 mg/kg of MMF (the morpholinoethyl ester prodrug of Mycophenolic acid) was administered orally twice daily. After 14 days post-tumor implantation, the MMF-treated group showed a 70% reduction in tumor growth compared to controls. Furthermore, MMF treatment significantly decreased microvessel density (by 44%) and pericyte coverage (by 78%), as indicated by CD31 and α-smooth muscle actin staining, respectively, suggesting impaired tumor vascularization and underscoring its efficacy against tumor proliferation [2].

Solubility Information

Solubility	H2O: 80 mg/mL (233.7 mM),Sonication is recommended. DMSO: 140 mg/mL (408.97 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.9212 mL	14.6062 mL	29.2124 mL
5 mM	0.5842 mL	2.9212 mL	5.8425 mL
10 mM	0.2921 mL	1.4606 mL	2.9212 mL
50 mM	0.0584 mL	0.2921 mL	0.5842 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

Welch SR, et al. Screening and Identification of Lujo Virus Inhibitors Using a Recombinant Reporter Virus Platform. Viruses. 2021 Jun 28;13(7):1255.

Domhan S, et al. Molecular mechanisms of the antiangiogenic and antitumor effects of mycophenolic acid. Mol Cancer Ther. 2008 Jun;7(6):1656-68.