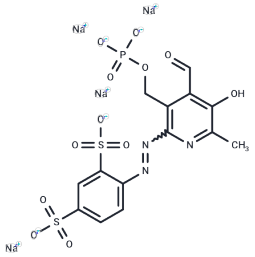
Data Sheet (Cat.No.T16564)

TargetMol

PPADS tetrasodium

Chemical Properties



CAS No. : 192575-19-2

Formula: C14H10N3Na4O12PS2

Molecular Weight: 599.3

Storage: Keep away from moisture,Store at low temperature
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	PPADS tetrasodiuma is a potent P2X receptor antagonist and inhibitor of the inverse mode of Na/Ca^{2+} exchange in guinea pig airway smooth muscle and is neuroprotective against glutamate/NMDA toxicity.PPADS tetrasodiuma inhibits P2X1, P2X-2, P2X-3, and P2X- 5. 5.
Targets(IC50)	Na+/Ca2+ Exchanger,P2X Receptor
In vitro	In a time- and concentration-dependent manner, PPADS tetrasodiuma (1-30 μM; 10-50 minutes) inhibits Na+/Ca2+ exchanger reverse mode (NCXREV)[2]. PPADS tetrasodiuma is effective at other native and recombinant P2XRs. Sensitivity to PPADS tetrasodiuma at human P2XRs depends on the subtype and is highest at the hP2X1, -2, -3, -5, and -7Rs with an IC50 of ~1-3 μM and ~30 μM for the hP2X4R[3].
In vivo	In mesangial proliferative glomerulonephritis, PPADS tetrasodiuma (15-60 mg/100g body weight (BW); i.p.; every 12 hours for 8 days) inhibits the proliferation of glomerular mesangial cells (MC) without altering the proliferation of non-MC in vivo[4].

Solubility Information

Solubility	H2O: 40 mg/mL (66.74 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6686 mL	8.3431 mL	16.6861 mL
5 mM	0.3337 mL	1.6686 mL	3.3372 mL
10 mM	0.1669 mL	0.8343 mL	1.6686 mL
50 mM	0.0334 mL	0.1669 mL	0.3337 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

Flores-Soto E, et al. PPADS, a P2X receptor antagonist, as a novel inhibitor of the reverse mode of the Na^+/Ca^{2+} exchanger in guinea pig airway smooth muscle. Eur J Pharmacol. 2012 Jan 15;674(2-3):439-44.
Rost S, et al. P2 receptor antagonist PPADS inhibits mesangial cell proliferation in experimental mesangialproliferative glomerulonephritis. Kidney Int. 2002 Nov;62(5):1659-71.
Einfluss von ATP und seinen Derivaten auf die Aktivierung von Monozyten.
Huo H, et al. Mapping the binding site of the P2X receptor antagonist PPADS reveals the importance of orthosteric site charge and the cysteine-rich head region. J Biol Chem. 2018 Aug 17;293(33):12820-12831.