Product Data Sheet

Product Name: iso-PPADS tetrasodium salt
Cat. No.: GC10990

Chemical Properties

Cas. No.	207572-67-6		
Chemical Name	sodium (Z)-2-(2-(4-formyl-6-methyl-5-oxo-3-((phosphonatooxy)methyl)pyridin-2(5H)-ylidene)hydrazinyl)benzene-1,4-disulfonate		
SMILES	[O-]S(=O)(C(C(N/N=C(C(COP([O-])([O-])=O)=C1C=O)\N=C(C)C1=O)=C2)=CC=C2S([O-])(=O)=O)=O.[Na+].[Na+].[Na+].[Na+]		
Formula	$C_{14}H_{10}N_3Na_4O_{12}PS_2$	M.Wt	599.3
Solubility	<59.93mg/ml in Water	Storage	Desiccate at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	iso-PPADS tetrasodium salt		

Background

Iso-PPADS tetrasodium salt is a specific P2 purinoceptors antagonist [3].
P2 purinoceptors mediate the actions of adenosine 5'-tri- phosphate (ATP) on many physiological systems including most vascular and visceral smooth muscles and certain neur- ones in the peripheral and central nervous systems
IsoPPADS (10 uM) depressed alpha, beta-Me-ATP-evoked depolarizations but did not alter depolarizations evoked by UTP. So it is concluded that IsoPPADS is antagonist at P2x-purinoceptor but not at the receptor that mediate UTP-evoked depolarization of the rat superior cervical ganglion [1]. In functional studies, iso-PPADS identified two populations of [3H]alpha,beta-meATP binding sites, 26.4% of these having low affinity (pKi of 4.4 +/- 0.2), and 73.6% having high affinity (pKi of 6.5 +/- 0.02) for iso-PPADS [2]. Iso-PPADS (1 X 10-6 -1 X 10-5 M) produced a concentration-related depression in the

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maxima of the concentration-effect curves to alpha,beta-methylene ATP. The antagonistic effect of iso-PPADS (1 x 10-5 M) was partially attenuated by suramin (1 x 10-4 M) and this interaction reflects a slow dissociation of iso-PPADS from the receptor with which suramin and alpha, beta-methylene ATP interact [3].

Reference:

[1]. Connolly GP. Differentiation by pyridoxal 5-phosphate, PPADS and isoPPADS between responses mediated by UTP and those evoked by α, β-methylene-ATP on rat sympathetic ganglia. Br J Pharmacol, 1995, 114(3): 727-731.

[2]. Khakh BS, Michel A, Humphrey PP. Estimates of antagonist affinities at P2X purinoceptors in rat vas deferens. Eur J Pharmacol, 1994, 263(3): 301-309.

[3]. Trezise DJ, Kennedy I, Humphrey PP. The use of antagonists to characterize the receptors mediating depolarization of the rat isolated vagus nerve by α,β-methylene adenosine 5'-triphosphate. Br J Pharmacol, 1994, 112(1): 282-288.

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