

Product datasheet

PPADS, P2 purinergic receptor antagonist ab120009

7 References 3 Images

Overview

Product name	PPADS, P2 purinergic receptor antagonist
Description	P2 purinergic receptor antagonist
Biological description	P2 purinergic receptor antagonist.
CAS Number	149017-66-3

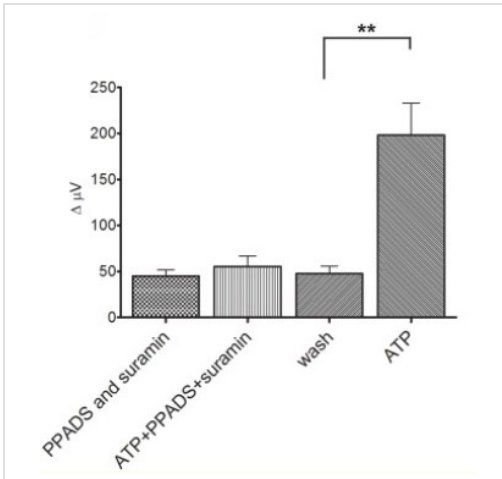
Chemical structure



Properties

Chemical name	4-[[4-Formyl-5-hydroxy-6-methyl-3-[(phosphonoxy)methyl]-2-pyridinyl]azo]-1,3-benzenedisulfonic acid tetrasodium salt
Molecular weight	599.30
Molecular formula	C ₁₄ H ₁₀ N ₃ Na ₄ O ₁₂ PS ₂
Storage instructions	Store at -20°C. Store under desiccating conditions. The product can be stored for up to 12 months.
Solubility overview	Soluble in water to 100 mM
Handling	<p>Wherever possible, you should prepare and use solutions on the same day. However, if you need to make up stock solutions in advance, we recommend that you store the solution as aliquots in tightly sealed vials at -20°C. Generally, these will be useable for up to one week. Before use, and prior to opening the vial we recommend that you allow your product to equilibrate to room temperature for at least 1 hour.</p> <p>Need more advice on solubility, usage and handling? Please visit our frequently asked questions (FAQ) page for more details.</p>
SMILES	O=S(=O)(O[Na])c2ccc(/N=N/c1nc(C)c(O)c(C=O)c1COP(=O)(O[Na])O[Na])c(c2)S(=O)(=O)O[Na]
Source	Synthetic

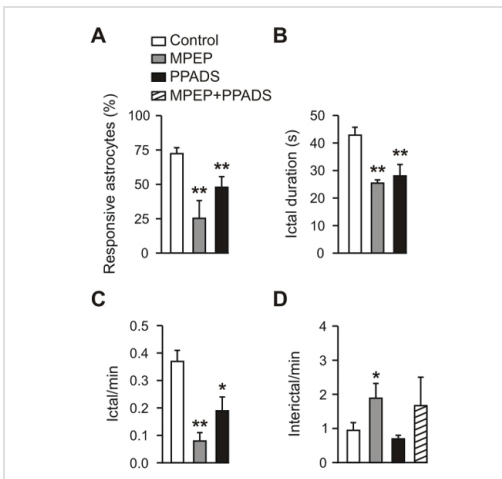
Images



Other - PPADS, P2 purinergic receptor antagonist (ab120009)

Image from Tchernookova B, et al. Plos One, 13(2), e0190893. Fig 2c; doi: 10.1371/journal.pone.0190893

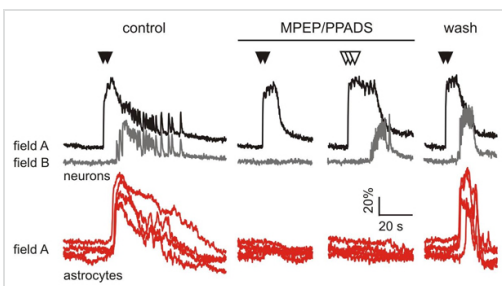
Inhibition by suramin and PPADS significantly reduces the ATP-induced increase in extracellular H⁺ flux from isolated Müller cells. Mean responses to 10 μM ATP with or without suramin and PPADS in the bath; N = 7, error bars represent SEMs.



Functional Studies - PPADS, P2 purinergic receptor antagonist (ab120009)

Image from Gómez-Gonzalo Met al., PLoS Biol. 2010;8(4):e1000352. Fig 2; doi: 10.1371/journal.pbio.1000352. Reproduced under the Creative Commons license <http://creativecommons.org/licenses/by/4.0/>

Astrocyte Ca²⁺ signal inhibition does not affect interictal discharges. (A–D) Mean percentage of astrocytes activated by the ictal discharges (A), mean duration (B) and frequency (C) of the ictal discharge, and mean frequency of interictal discharges (D) under different experimental conditions in EC slice preparations. Controls (n=16), MPEP (ab120008) (n=7), PPADS (ab120009) (n=9), and MPEP+PPADS (n=3). A single asterisk (*) indicates p<0.05; double asterisks (**), p<0.01.



Functional Studies - PPADS, P2 purinergic receptor antagonist (ab120009)

Image from Gómez-Gonzalo Met al., PLoS Biol. 2010;8(4):e1000352. Fig 6(A); doi: 10.1371/journal.pbio.1000352.

Ca²⁺ signal from a field A neuron, a field B neuron, and field A astrocytes in response to repetitive episodes of NMDA stimulation (black arrowheads). The NMDA stimulation that evoked an ictal discharge became ineffective after blocking the astrocyte response by bath perfusion with MPEP (ab120008) and PPADS (ab120009). An ictal discharge could be recovered by increasing the number of NMDA puffs (white arrowheads). A double NMDA pulse evoked both astrocyte activation and the ictal discharge after inhibitor washout.

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