PPNDS tetrasodium

Cat. No.: HY-108675

CAS No.: 1021868-77-8

Molecular Formula: $C_{18}H_{11}N_4Na_4O_{14}PS_2$

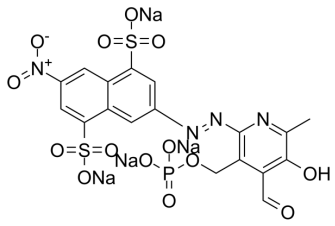
Molecular Weight: 694.36

Target: MMP; P2X Receptor

Pathway: Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel

Storage: -20°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 37.5 mg/mL (54.01 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.4402 mL	7.2009 mL	14.4018 mL
	5 mM	0.2880 mL	1.4402 mL	2.8804 mL
	10 mM	0.1440 mL	0.7201 mL	1.4402 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

PPNDS tetrasodium is a selective and competitive meprin β inhibitor (IC_{50}: 80 nM, K_i: 8 nM), and also inhibits ADAM10 (IC_{50}: 1.2 μM). PPNDS tetrasodium is also a P2X1 receptor antagonist. PPNDS is an agonist for the ATP receptor of Paramecium. PPNDS tetrasodium potently inhibits polymerases from viruses. PPNDS tetrasodium can be used in the research of infection and cancers[1][3][4].

IC_{50} & Target				
	ADAM10 1.2 μM (IC_{50})	ADAM10 1.2 μM (IC_{50})	p2x1 Receptor	p2x1 Receptor

In Vitro

PPNDS tetrasodium inhibits meprin β (IC_{50}: 80 nM) and meprin α (67 μM)[1].

PPNDS tetrasodium (0-10 μM, 15 min) inhibits mNV-RdRp (murine Norovirus RNA-dependent RNA-polymerase) with an IC_{50} value of 0.88 μM[2].

PPNDS tetrasodium (0.025-10 μM) potently inhibits polymerases from six viruses spanning the three Caliciviridae genera tested (IC_{50} range: 0.1-2.3 μM)[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Franck Madoux, et al. Development of high throughput screening assays and pilot screen for inhibitors of metalloproteases meprin α and β. Biopolymers. 2014 Sep;102(5):396-406.

[2]. Romina Croci, et al. PPNDS inhibits murine Norovirus RNA-dependent RNA-polymerase mimicking two RNA stacking bases. FEBS Lett. 2014 May 2;588(9):1720-5.

[3]. Christopher R Wood, et al. PPNDS is an agonist, not an antagonist, for the ATP receptor of Paramecium. J Exp Biol. 2003 Feb;206(Pt 3):627-36.

[4]. Natalie E Netzler, et al. Broad-spectrum non-nucleoside inhibitors for caliciviruses. Antiviral Res. 2017 Oct;146:65-75.

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