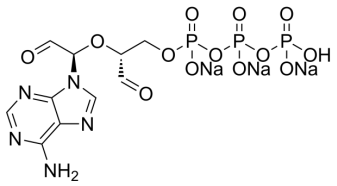
Oxidized ATP trisodium salt

Cat. No.:	HY-137888A
CAS No.:	71997-40-5
Molecular Formula:	$C_{10}H_{11}N_5Na_3O_{13}P_3$
Molecular Weight:	571.11
Target:	P2X Receptor; NOD-like Receptor (NLR)
Pathway:	Membrane Transporter/Ion Channel; Immunology/Inflammation
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 : 50 mg/mL (87.55 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7510 mL	8.7549 mL	17.5098 mL
	5 mM	0.3502 mL	1.7510 mL	3.5020 mL
	10 mM	0.1751 mL	0.8755 mL	1.7510 mL

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

BIOLOGICAL ACTIVITY

Description

Oxidized ATP (oATP) trisodium salt is a broad-spectrum P2 receptor inhibitor. Oxidized ATP trisodium salt irreversibly antagonizes P2X7R activation. Oxidized ATP trisodium salt inhibits c-reactive protein (CRP)-induced NLRP3 inflammasome activation. Oxidized ATP trisodium salt can be used for research of atherosclerosis[1][2].

IC_{50} & Target		
	NLRP3 inflammasome	P2X7 Receptor

In Vitro

Oxidized ATP trisodium salt (100 μM, 1 h) inhibits CRP (20 μg/mL, 24 h)-induced caspase-1 activation and maturation of IL-1β in HUVECs[1].

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

In Vivo

Oxidized ATP (300 μg/mouse, i.p., twice a week) trisodium salt ameliorates the induced mouse experimental autoimmune uveitis (EAU) in B6 mice[2].

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

Animal Model:	Induced mouse experimental autoimmune uveitis (EAU)[2]

Dosage:	300 μg/mouse
Administration:	i.p.
Result:	Showed almost undetected EAU, as shown by fundoscopic and pathologic examination. Decreased serum IL-17 level. Mitigated the autoreactive T cell response.

REFERENCES

[1]. Bian F, et al. CRP-Induced NLRP3 Inflammasome Activation Increases LDL Transcytosis Across Endothelial Cells. Front Pharmacol. 2019 Jan 30;10:40.

[2]. Zhao R, et al. Blockade of Extracellular ATP Effect by Oxidized ATP Effectively Mitigated Induced Mouse Experimental Autoimmune Uveitis (EAU). PLoS One. 2016 May 19;11(5):e0155953.

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