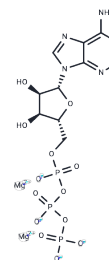


ATP dimagnesium

Chemical Properties

CAS No. :	74804-12-9
Formula:	C ₁₀ H ₁₂ Mg ₂ N ₅ O ₁₃ P ₃
Molecular Weight:	551.76
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	ATP dimagnesium is an important substance for energy storage and metabolism in the body and is involved in the energy cycle and metabolism of the body. ATP dimagnesium can act as a coenzyme in cells and can be used as a signaling molecule.
Targets(IC50)	Others, Endogenous Metabolite
In vitro	ATP dimagnesium (5 mM; 1h) and LPS (1 µg/mL) Co-treatment have a synergistic effect on the activation of NLRP3 inflammasome in HGFs.[3] ATP dimagnesium (2 mM; 0.5-24h) induces BMDM secretion of IL-1β, KC, and MIP-2 in a caspase-1 activation-dependent manner. ATP dimagnesium promotes neutrophil chemotaxis in vitro.[4]
In vivo	ATP dimagnesium (50 mg/kg; i.p.; Four-week-old Kunming mice) protected mice from bacterial infection in vivo. ATP dimagnesium induced the secretion of IL-1β, KC, and MIP-2 and neutrophil recruitment in vivo.[4]

Solubility Information

Solubility	H ₂ O: 166.7 mg/mL (302.12 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8124 mL	9.0619 mL	18.1238 mL
5 mM	0.3625 mL	1.8124 mL	3.6248 mL
10 mM	0.1812 mL	0.9062 mL	1.8124 mL
50 mM	0.0362 mL	0.1812 mL	0.3625 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

Swennen EL, et al. Immunoregulatory effects of adenosine 5'-triphosphate on cytokine release from stimulated whole blood. *Eur J Immunol.* 2005 Mar;35(3):852-8.

M J L Bours, et al. Adenosine 5'-triphosphate and adenosine as endogenous signaling molecules in immunity and inflammation. *Pharmacol Ther.* 2006 Nov;112(2):358-404.

Shuo Xu, et al. Doxycycline inhibits NAcH Leucine-rich repeat Protein 3 inflammasome activation and interleukin-1 β production induced by Porphyromonas gingivalis-lipopolysaccharide and adenosine triphosphate in human gingival fibroblasts. *Arch Oral Biol.* 2019 Nov;107:104514.

Yang Xiang, et al. Adenosine-5'-Triphosphate (ATP) Protects Mice against Bacterial Infection by Activation of the NLRP3 Inflammasome. *PLoS One.* 2013; 8(5): e63759.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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