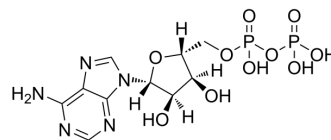


## Adenosine 5'-diphosphate

<b>Cat. No.:</b>	HY-W010918
<b>CAS No.:</b>	58-64-0
<b>Molecular Formula:</b>	C <sub>10</sub> H <sub>15</sub> N <sub>5</sub> O <sub>10</sub> P <sub>2</sub>
<b>Molecular Weight:</b>	427.2
<b>Target:</b>	Endogenous Metabolite
<b>Pathway:</b>	Metabolic Enzyme/Protease
<b>Storage:</b>	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	H <sub>2</sub> O : 50 mg/mL (117.04 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	<b>Preparing Stock Solutions</b>	1 mM	2.3408 mL	11.7041 mL	23.4082 mL
		5 mM	0.4682 mL	2.3408 mL	4.6816 mL
		10 mM	0.2341 mL	1.1704 mL	2.3408 mL
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (234.08 mM); Clear solution; Need ultrasonic and warming and heat to 60°C				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Adenosine 5'-diphosphate (Adenosine diphosphate) is a nucleoside diphosphate. Adenosine 5'-diphosphate is the product of ATP dephosphorylation by ATPases. Adenosine 5'-diphosphate induces human platelet aggregation and inhibits stimulated adenylate cyclase by an action at P <sub>2T</sub> -purinoceptors.
<b>IC<sub>50</sub> &amp; Target</b>	Human Endogenous Metabolite
<b>In Vitro</b>	Adenosine 5'-diphosphate consists of the pyrophosphate group, the pentose sugar ribose, and the nucleobase adenine. Adenosine 5'-diphosphate is the product of ATP dephosphorylation by ATPases. ADP is converted back to ATP by ATP synthases. ATP is an important energy transfer molecule in cells. Adenosine 5'-diphosphate is utilized in a wide number of cellular processes, including respiration, biosynthetic reactions, motility, and cell division. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

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## REFERENCES

[1]. Arts IC, et al. Adenosine 5'-triphosphate (ATP) supplements are not orally bioavailable: a randomized, placebo-controlled cross-over trial in healthy humans. J Int Soc Sports Nutr. 2012 Apr 17;9(1):16.

[2]. Noel J. Cusack, et al. Effects of phosphate-modified analogs of adenosine 5'-diphosphate and adenosine 5'-triphosphate at P<sub>2T</sub>-purinoceptors mediating human platelet activation by ADP. April 1996.

[3]. Adenosine-5'-diphosphate

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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