

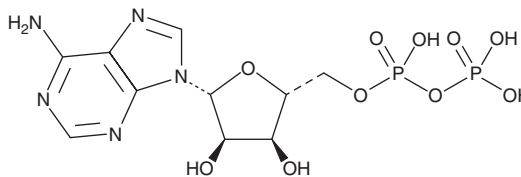
# PRODUCT INFORMATION



## Adenosine 5'-diphosphate

Item No. 16778

**CAS Registry No.:** 58-64-0  
**Formal Name:** adenosine 5'-(trihydrogen diphosphate)  
**Synonyms:** Adenosine Pyrophosphate, ADP, 5'-ADP  
**MF:** C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>10</sub>P<sub>2</sub>  
**FW:** 427.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 258 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Adenosine 5'-diphosphate (ADP) is supplied as a crystalline solid. Aqueous solutions of ADP can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ADP in PBS (pH 7.2) is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

ADP is a central component of energy storage, metabolism, and signal transduction *in vivo*. It serves as a precursor for ATP (Item No. 14498) and, in this capacity, is utilized in a wide number of cellular processes, including respiration, biosynthetic reactions, motility, and cell division.<sup>1,2</sup> ADP is also an agonist of purinergic receptors that mediate platelet aggregation.<sup>3</sup>

### References

1. Knowles, J.R. Enzyme-catalyzed phosphoryl transfer reactions. *Annu. Rev. Biochem.* **49**, 877-919 (1980).
2. Klingenberg, M. The ADP and ATP transport in mitochondria and its carrier. *Biochim. Biophys. Acta* **1778(10)**, 1978-2021 (2008).
3. Abbracchio, M.P., Burnstock, G., Boeynaems, J.-M., *et al.* International Union of Pharmacology LVIII: Update on the P2Y G protein-coupled nucleotide receptors: From molecular mechanisms and pathophysiology to therapy. *Pharmacol. Rev.* **58(3)**, 281-341 (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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