

# PRODUCT INFORMATION



## ADP-Glucose (sodium salt)

Item No. 18139

**CAS Registry No.:** 102129-65-7  
**Formal Name:** adenosine 5'-(trihydrogen diphosphate), P<sup>1</sup>-β-D-glucopyranosyl ester, disodium salt

**Synonyms:** Adenosine-5'-diphosphoglucose, ADPG

**MF:** C<sub>16</sub>H<sub>23</sub>N<sub>5</sub>O<sub>15</sub>P<sub>2</sub> • 2Na  
**FW:** 633.3

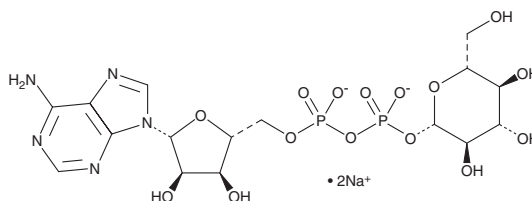
**Purity:** ≥95%

**UV/Vis.:** λ<sub>max</sub>: 259 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

ADPG (sodium salt) is supplied as a crystalline solid. Aqueous solutions of ADPG (sodium salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ADPG (sodium salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

ADPG is an immediate precursor used in the biosynthesis, by glucose addition, of storage polysaccharides in plants, green algae, and cyanobacteria, as well as structural polysaccharides in certain bacteria.<sup>1,2</sup> It is used by amylose synthases or starch synthases in plastids in the production of amylose, amylopectins, starch, and other polysaccharides. ADPG is normally generated within plastids, although it can be biosynthesized in the cytoplasm of certain grasses and imported into plastids by a membrane-bound transporter.<sup>3</sup>

### References

1. Ball, S.G. and Morell, M.K. From bacterial glycogen to starch: Understanding the biogenesis of the plant starch granule. *Annu. Rev. Plant Biol.* **54**, 207-233 (2003).
2. Sambou, T., Dinadayala, P., Stadthagen, G., *et al.* Capsular glucan and intracellular glycogen of *Mycobacterium tuberculosis*: Biosynthesis and impact on the persistence in mice. *Mol. Microbiol.* **70(3)**, 762-774 (2008).
3. Comparot-Moss, S. and Denyer, K. The evolution of the starch biosynthetic pathway in cereals and other grasses. *J. Exp. Bot.* **60(9)**, 2481-2492 (2009).

#### 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.

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