

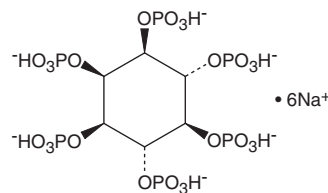
PRODUCT INFORMATION



D-myo-Inositol-1,2,3,4,5,6-hexaphosphate (sodium salt)

Item No. 10008415

CAS Registry No.: 34367-89-0
Formal Name: myo-inositol, 1,2,3,4,5,6-hexakis(dihydrogen phosphate), hexasodium salt
Synonyms: IP₆, Phytic Acid
MF: C₆H₁₂O₂₄P₆ • 6Na
FW: 791.9
Purity: ≥98%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥5 years



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

Laboratory Procedures

D-myo-Inositol-1,2,3,4,5,6-hexaphosphate (IP₆) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the IP₆ (sodium salt) in water. The solubility of IP₆ (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

IP₆ is a phosphate ester of inositol. It is found in mammalian cells and undergoes interconversion to other forms of inositol phosphate that act as second messengers in cell signaling.¹ IP₆ is an antioxidant that chelates iron at a molar ratio of 1:4 to reduce iron-induced hydroxy radical production and lipid peroxidation in cell-free assays.² It also inhibits the formation of thiobarbituric acid reacting substances (TBARS) in cooked chicken breast when used at a concentration of 1.5 mM. IP₆ inhibits proliferation of a variety of cancer cells *in vitro* and reduces tumor growth in rodent xenograft models.³ It is also known as phytic acid and is considered an anti-nutrient that binds minerals, including calcium, iron, magnesium, and zinc, in grains, legumes, oilseeds, nuts, and other plants and prevents their absorption in the gastrointestinal tract of humans and animals that ingest them.¹ Formulations containing IP₆ have been used in cosmetics and as preservatives in food production. Cayman's IP₆ is a highly purified product intended for use in biomedical research applications.

References

- Schlemmer, U., Frølich, W., Prieto, R.M., *et al.* Phytate in foods and significance for humans: Food sources, intake, processing, bioavailability, protective role and analysis. *Mol. Nutr. Food Res.* **53**(Suppl 2), S330-S375 (2009).
- Graf, E. and Eaton, J.W. Antioxidant functions of phytic acid. *Free Radic. Biol. Med.* **8**(1), 61-69 (1990).
- Vucenik, I. and Shamsuddin, A.M. Protection against cancer by dietary IP₆ and inositol. *Nutr. Cancer* **55**(2), 109-125 (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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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