

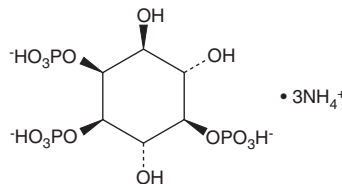
# Product Information



## D-*myo*-Inositol-2,3,5-triphosphate (ammonium salt)

Catalog No. 10008423

**Formal Name:** D-*myo*-inositol-2,3,5-tris(dihydrogen phosphate), triammonium salt  
**Synonyms:** Ins(2,3,5)P<sub>3</sub> (ammonium salt), 2,3,5-IP<sub>3</sub> (ammonium salt)  
**MF:** C<sub>6</sub>H<sub>12</sub>O<sub>15</sub>P<sub>3</sub> • 3NH<sub>4</sub>  
**FW:** 522.3  
**Purity:** ≥98%  
**Stability:** ≥1 year at -20°C  
**Supplied as:** A lyophilized powder



### Laboratory Procedures

For long term storage, we suggest that D-*myo*-inositol-2,3,5-triphosphate (ammonium salt) (Ins(2,3,5)P<sub>3</sub> (ammonium salt)) be stored as supplied at -20°C. It should be stable for at least one year.

Ins(2,3,5)P<sub>3</sub> (ammonium salt) is supplied as a lyophilized powder. Ins(2,3,5)P<sub>3</sub> (ammonium salt) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of Ins(2,3,5)P<sub>3</sub> (ammonium salt) be prepared by directly dissolving the lyophilized powder in aqueous buffers or water. The solubility of Ins(2,3,5)P<sub>3</sub> (ammonium salt) in PBS, pH 7.2, and water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Ins(2,3,5)P<sub>3</sub> (ammonium salt) is a member of the inositol phosphate (InsP) family of second messengers that play a critical role in the transmission of cellular signals.<sup>1,2</sup> The most studied InsP, Ins(1,4,5)P<sub>3</sub> is a second messenger produced in cells by phospholipase C (PLC)-mediated hydrolysis of phosphatidylinositol-4,5-bisphosphate.<sup>3,4</sup> Binding Ins(1,4,5)P<sub>3</sub> to its receptor on the endoplasmic reticulum results in opening of the calcium channels and an increase in intracellular calcium.<sup>4,5</sup> Ins(2,3,5)P<sub>3</sub> (ammonium salt) (tested as a racemic mixture) is 500-fold less potent than Ins(1,4,5)P<sub>3</sub> at initiating Ca<sup>2+</sup> release when injected into *Xenopus* oocytes.<sup>6</sup>

### References

1. Berridge, M.J. Inositol trisphosphate and calcium signalling. *Nature* **361**, 315-325 (1993).
2. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
3. Streb, H., Irvine, R.F., Berridge, M.J., *et al.* Release of Ca<sup>2+</sup> from a nonmitochondrial intracellular store in pancreatic acinar cells by inositol-1,4,5-trisphosphate. *Nature* **306**, 67-69 (1983).
4. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-triphosphate receptor. *Jpn. J. Pharmacol.* **74**, 125-137 (1997).
5. Exton, J.H. Regulation of phosphoinositide phospholipases by hormones, neurotransmitters, and other agonists linked to G proteins. *Annu. Rev. Pharmacol. Toxicol.* **36**, 481-509 (1996).
6. DeLisle, S., Radenberg, T., Wintermantel, M.R., *et al.* Second messenger specificity of the inositol trisphosphate receptor: Reappraisal based on novel inositol phosphates. *Am. J. Physiol. Cell Physiol.* **35**, C429-C436 (1994).

### Related Products

D-*myo*-Inositol-1,4,5-triphosphate (potassium salt) - Cat. No. 60960 • D-*myo*-Inositol-1,3,4-triphosphate (sodium salt) - Cat. No. 60972 • D-*myo*-Inositol-1,3,4,5-tetraphosphate (sodium salt) - Cat. No. 60980 • D-*myo*-Inositol-1-phosphate (sodium salt) - Cat. No. 100007777 • D-*myo*-Inositol-3-phosphate (sodium salt) - Cat. No. 10007778 • D-*myo*-Inositol-2,4,5-triphosphate (sodium salt) - Cat. No. 10007779 • D-*myo*-Inositol-1,2,6-triphosphate (sodium salt) - Cat. No. 10007780 • D-*myo*-Inositol-1,3,5-triphosphate (sodium salt) - Cat. No. 10007781 • D-*myo*-Inositol-3,4,5,6-tetraphosphate (sodium salt) - Cat. No. 10007782 • D-*myo*-Inositol-1,4,5,6-tetraphosphate (sodium salt) - Cat. No. 10007783 • D-*myo*-Inositol-1,3,4,5,6-pentaphosphate (sodium salt) - Cat. No. 10007784 • D-*myo*-Inositol-1,4,5-triphosphate (sodium salt) - Cat. No. 10008205 • D-*myo*-Inositol-4,5-diphosphate (sodium salt) - Cat. No. 10008418 • D-*myo*-Inositol-2,5,6-triphosphate (sodium salt) - Cat. No. 10008424 • D-*myo*-Inositol-1,4,6-triphosphate (sodium salt) - Cat. No. 10008427 • D-*myo*-Inositol-4-phosphate (ammonium salt) - Cat. No. 10008437 • D-*myo*-Inositol-1,4-diphosphate (sodium salt) - Cat. No. 10008438 • D-*myo*-Inositol-1,2-diphosphate (sodium salt) - Cat. No. 10008439 • D-*myo*-Inositol-1,5-diphosphate (sodium salt) - Cat. No. 10008441 • D-*myo*-Inositol-1,3-diphosphate (sodium salt) - Cat. No. 10008443 • D-*myo*-Inositol-1,2,5,6-tetraphosphate (sodium salt) - Cat. No. 10008444 • D-*myo*-Inositol-1,2,3,4-tetraphosphate (sodium salt) - Cat. No. 10008448 • D-*myo*-Inositol-1,2,3,5-tetraphosphate (sodium salt) - Cat. No. 10008449 • D-*myo*-Inositol-1,2,3,6-tetraphosphate (sodium salt) - Cat. No. 10008450 • D-*myo*-Inositol-1,2,4,5-tetraphosphate (sodium salt) - Cat. No. 10008451 • D-*myo*-Inositol-1,2,4,5,6-pentaphosphate (sodium salt) - Cat. No. 10008452 • D-*myo*-Inositol-1,3,4,5,6-pentaphosphate (ammonium salt) - Cat. No. 10009851

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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