

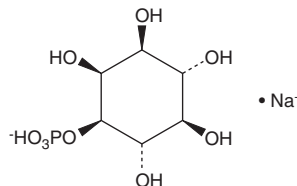
# PRODUCT INFORMATION



## D-myo-Inositol-3-phosphate (sodium salt)

Item No. 10007778

**Formal Name:** D-myo-inositol-3-hydrogen phosphate, monosodium salt  
**Synonyms:** Ins(3)P<sub>1</sub> (sodium salt), 3-IP<sub>1</sub> (sodium salt)  
**MF:** C<sub>6</sub>H<sub>12</sub>O<sub>9</sub>P • Na  
**FW:** 282.1  
**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-3-phosphate (Ins(3)P<sub>1</sub>) (sodium salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the Ins(3)P<sub>1</sub> (sodium salt) in water. The solubility of Ins(3)P<sub>1</sub> (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Ins(3)P<sub>1</sub> is a member of the inositol phosphate (InsP) molecular 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 of 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(3)P<sub>1</sub> can be formed by the dephosphorylation of polyphosphate inositols such as Ins(3,4)P<sub>2</sub> by inositol polyphosphate 4-phosphatase.<sup>1</sup>

### References

1. Majerus, P.W. Inositol phosphate biochemistry. *Annu. Rev. Biochem.* **61**, 225-250 (1992).
2. Berridge, M.J. Inositol trisphosphate and calcium signalling. *Nature* **361**, 315-325 (1993).
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(5938)**, 67-69 (1983).
4. Yoshida, Y. and Imai, S. Structure and function of inositol 1,4,5-trisphosphate receptor. *Jpn. J. Pharmacol.* **74(2)**, 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).

#### 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.

Copyright Cayman Chemical Company, 07/11/2023

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 • USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
[WWW.CAYMANCHEM.COM](http://WWW.CAYMANCHEM.COM)