

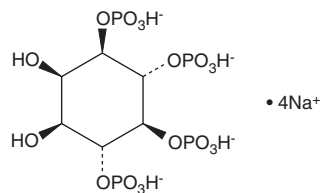
# PRODUCT INFORMATION



## D-*myo*-Inositol-1,4,5,6-tetraphosphate (sodium salt)

Item No. 10007783

**CAS Registry No.:** 157542-47-7  
**Formal Name:** D-*myo*-inositol-1,4,5,6-tetra(hydrogen phosphate), tetrasodium salt  
**Synonyms:** Ins(1,4,5,6)-P<sub>4</sub>, 1,4,5,6-IP<sub>4</sub>  
**MF:** C<sub>6</sub>H<sub>12</sub>O<sub>18</sub>P<sub>4</sub> • 4Na  
**FW:** 588.0  
**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-1,4,5,6-tetraphosphate (sodium salt) (Ins(1,4,5,6)-P<sub>4</sub>) is supplied as a lyophilized powder. Ins(1,4,5,6)-P<sub>4</sub> is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(1,4,5,6)-P<sub>4</sub> be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(1,4,5,6)-P<sub>4</sub> in water is at least 50 mg/ml.

### Description

Ins(1,4,5,6)-P<sub>4</sub> is one of several different inositol oligophosphate isomers implicated in signal transduction. Production of Ins(1,4,5,6)-P<sub>4</sub> by intestinal epithelial cells increases approximately 2-14 fold, depending on the strain and incubation time, following infection with *Salmonella*.<sup>1</sup> Ins(1,4,5,6)-P<sub>4</sub> antagonizes epidermal growth factor (EGF) signalling through the phosphatidylinositol 3-kinase pathway.<sup>1</sup> Ins(1,4,5,6)-P<sub>4</sub> (tested as the D/L racemic mixture) is ~1,000-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>2</sup>

### References

1. Eckmann, L., Rudolf, M.T., Ptasznik, A., *et al.* D-*myo*-Inositol 1,4,5,6-tetrakisphosphate produced in human intestinal epithelial cells in response to salmonella invasion inhibits phosphoinositide 3-kinase signaling pathways. *Proc. Natl. Acad. Sci. USA* **94**, 14456-14460 (1997).
2. 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).

#### 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