

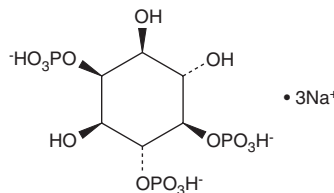
# PRODUCT INFORMATION



## D-myo-Inositol-2,4,5-triphosphate (sodium salt)

Item No. 10007779

<b>Formal Name:</b>	D-myo-inositol-2,4,5-tris(hydrogen phosphate), trisodium salt
<b>Synonyms:</b>	Ins(2,4,5)P <sub>3</sub> (sodium salt), 2,4,5-IP <sub>3</sub> (sodium salt)
<b>MF:</b>	C <sub>6</sub> H <sub>12</sub> O <sub>15</sub> P <sub>3</sub> • 3Na
<b>FW:</b>	486.0
<b>Purity:</b>	≥98%
<b>Supplied as:</b>	A lyophilized powder
<b>Storage:</b>	-20°C
<b>Stability:</b>	≥5 years



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

### Laboratory Procedures

D-myo-Inositol-2,4,5-triphosphate (sodium salt) (Ins(2,4,5)P<sub>3</sub>) is supplied as a lyophilized powder. Ins(2,4,5)P<sub>3</sub> is practically insoluble in organic solvents. For biological experiments, we suggest that aqueous solutions of Ins(2,4,5)P<sub>3</sub> be prepared by directly dissolving the lyophilized powder in water. The solubility of Ins(2,4,5)P<sub>3</sub> in water is at least 50 mg/ml.

### Description

The inositol phosphates (InsP) play a critical role as small, soluble second messengers in the transmission of cellular signals.<sup>1,2</sup> The most studied InsP, Ins(1,4,5)P<sub>3</sub>, more commonly referred to as IP<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(2,4,5)P<sub>3</sub> is a metabolically stable analog of Ins(1,4,5)P<sub>3</sub> that is commonly used to study Ca<sup>2+</sup> signaling pathways. Ins(2,4,5)P<sub>3</sub> acts as a partial agonist at rat hepatic IP<sub>3</sub> receptors, exhibiting 65% of the maximal Ca<sup>2+</sup> response obtained with Ins(1,4,5)P<sub>3</sub>.<sup>6</sup>

### References

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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).
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6. Marchant, J.S., Chang, Y.-T., Chung, S.-K., et al. Rapid kinetic measurements of 45Ca<sup>2+</sup> mobilization reveal that Ins(2,4,5)P<sub>3</sub> is a partial agonist at hepatic InsP<sub>3</sub> receptors. *Biochem J.* **321**, 573-576 (1997).

#### 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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