

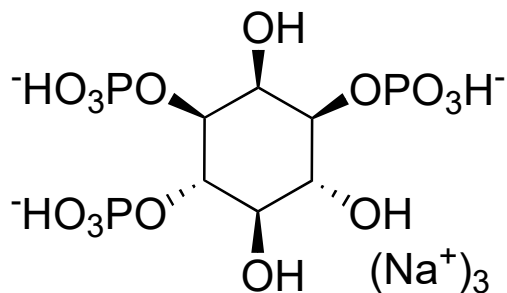
## D-*myo*-Inositol 1,3,4-trisphosphate [Ins(1,3,4)P<sub>3</sub>]

**Catalog number:** Q-0134

**Molecular Formula:** C<sub>6</sub>H<sub>12</sub>Na<sub>3</sub>O<sub>15</sub>P<sub>3</sub>

**MW:** 486.04

**CAS#:** 93133-76-7



**Alternate Name:** Inositol 1,3,4-triphosphate, I(1,3,4)P<sub>3</sub>

**Solubility:** >10 mg/mL in water and most aqueous buffers

**Storage and Handling:** Inositol polyphosphates (InsP<sub>n</sub>s) and analogs are stable for at least one year when stored as a solid, protected from moisture, at -20 °C or below. Storage in basic (pH > 9) or acidic (pH < 4) buffers may cause decomposition. After reconstitution, solutions of InsP<sub>n</sub>s should be stored at -20 °C or below. InsP<sub>n</sub>s are stable for at least three months when handled in this way. Repeated freeze/thaw cycles do not affect InsP<sub>n</sub>s. Do not store reconstituted InsP<sub>n</sub>s at 4 °C for more than 2-3 days.

**Background:** Inositol phosphates are important signaling molecules involved in numerous cellular functions. Inositol 1,3,4-trisphosphate (Ins(1,3,4)P<sub>3</sub>) is an intermediate in the inositol phosphate pathway. Ins(1,3,4)P<sub>3</sub> inhibits Ins(3,4,5,6)P<sub>4</sub> 1-kinase which regulates Ins(3,4,5,6)P<sub>4</sub> levels. Ins(3,4,5,6)P<sub>4</sub> in turn is responsible for inhibiting calcium-activated chloride channels. Ins(1,3,4)P<sub>3</sub> is produced by dephosphorylation of Ins(1,3,4,5)P<sub>4</sub> by a 5-phosphatase. Ins(1,3,4)P<sub>3</sub> is a substrate for phosphatases yielding Ins(1,3)P<sub>2</sub> and Ins(3,4)P<sub>2</sub>.

**References:** 1) K. Abel, *et al.* (2001) "Phosphatidylinositol and inositol phosphate metabolism" *Journal of Cell Science* 114: 2207-2208.

2) R.F. Irvine & M.J. Schell (2001) "Back in the water: the return of Inositol phosphates" *Nat. Rev.* 2:327-338

3) S.B. Shears, *et al.* (2012) "Defining Signal Transduction by Inositol Phosphates" *Subcell Biochem.* 59: 389-412.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

**Warranty and Disclaimer:** Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.

Technical Data Sheet, Rev 5, 9/27/2024 – **For research use only.** Not intended for diagnostic or therapeutic use.