

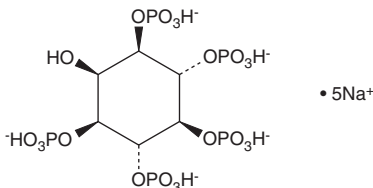
PRODUCT INFORMATION



D-*myo*-Inositol-1,3,4,5,6-pentaphosphate (sodium salt)

Item No. 10007784

Formal Name: D-*myo*-inositol-1,3,4,5,6-penta(hydrogen phosphate), pentasodium salt
Synonyms: Ins(1,3,4,5,6)P₅, 1,3,4,5,6-IP₅
MF: C₆H₁₂O₂₁P₅ • 5Na
FW: 690.0
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-1,3,4,5,6-pentaphosphate (Ins(1,3,4,5,6)P₅) (sodium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the Ins(1,3,4,5,6)P₅ (sodium salt) in water. The solubility of Ins(1,3,4,5,6)P₅ (sodium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

The phosphatidylinositol 3-kinase (PI3K)/Akt signal transduction pathway plays critical roles in cell growth and proliferation making it an attractive target for anticancer agents.¹ Ins(1,3,4,5,6)P₅ is one of the many inositol phosphate isomers that act as small, soluble second messengers in the transmission of cellular signals.²⁻⁴ It can be interconverted with Ins(3,4,5,6)P₄ by a 1-kinase/1-phosphatase cycle, as well as with Ins(1,4,5,6)P₄ in a 3-kinase/3-phosphatase cycle.⁴ Ins(1,3,4,5,6)P₅ inhibits the phosphorylation and kinase activity of Akt/PKB, inducing apoptosis in ovarian, lung, and breast cancer cells.⁵ It exhibits antiangiogenic activity *in vitro*, blocking capillary tube formation of HUVEC, as well as antitumor effects against cancer xenografts in nude mice.⁶ Ins(1,3,4,5,6)P₅ binds to the PH domain of Grp1 with a K_d value of 590 nM.⁷

References

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5. Piccolo, E., Vignati, S., Maffucci, T., et al. Inositol pentakisphosphate promotes apoptosis through the PI 3-K/Akt pathway. *Oncogene* **23**(9), 1754-1765 (2004).
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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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