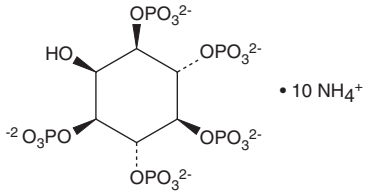
PRODUCT INFORMATION

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

Item No. 10009851

Formal Name:	D-*myo*-inositol-1,3,4,5,6-penta (hydrogen phosphate), decaammonium salt
Synonyms:	Ins(1,3,4,5,6)P_5, 1,3,4,5,6-IP_5 (sodium salt)
MF:	$C_6H_7O_{21}P_5 \bullet 10NH_4$
FW:	750.4
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)P_5) (ammonium salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the Ins(1,3,4,5,6)P_5 (ammonium salt) in water. The solubility of Ins(1,3,4,5,6)P_5 (ammonium salt) in water is approximately 50 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Ins(1,3,4,5,6)P_5 is one of the many inositol phosphate isomers that act as small, soluble second messengers in the transmission of cellular signals.[1-3] It can be interconverted with Ins(3,4,5,6)P_4 by a 1-kinase/1-phosphatase cycle, as well as with Ins(1,4,5,6)P_4 in a 3-kinase/3-phosphatase cycle.[3] Ins(1,3,4,5,6)P_5 inhibits the phosphorylation and kinase activity of Akt/PKB, inducing apoptosis in ovarian, lung, and breast cancer cells.[4] It exhibits antiangiogenic activity *in vitro*, blocking capillary tube formation of HUVEC, as well as antitumor effects against cancer xenografts in nude mice.[5] Ins(1,3,4,5,6)P_5 binds to the PH domain of Grp1 with a K_d of 590 nM.[6]

References

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4. 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).
5. Maffucci, T., Piccolo, E., Cumashi, A., *et al.* Inhibition of the phosphatidylinositol 3-kinase/Akt pathway by inositol pentakisphosphate results in antiangiogenic and antitumor effects. *Cancer Res.* **65(18)**, 8339-8349 (2005).
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