

Catalog Number: PHZ1301

Lot Number: See product label

Quantity: 1.0 mg

Appearance: White solid

Molecular Formula: C₂₃H₂₄O₈

Molecular Weight: 428.4

Purity: ≥98%, (TLC)

Summary: Wortmannin, a fungal metabolite, is a potent and selective inhibitor of phosphatidylinositol 3-kinase. This compound is active with purified preparations and cytosolic fractions, and because it is highly cell-permeable, it is also suitable for use with intact cells. Several biological effects are observed with wortmannin treatment, including the inhibition of fMLP induced PIP₃ and superoxide anion production in guinea pig neutrophils, and the blockage of the metabolic effects of insulin in isolated rat adipocytes without effect on the insulin receptor tyrosine kinase activity. The mechanism of wortmannin's inhibition of PI 3-kinase has been determined to be the formation of a covalent bond with its target. Wortmannin's inhibition of PI 3-kinase is selective, and inhibition of other kinases such as PI 4-kinase and myosin light chain kinase, occurs at concentrations 100 fold higher than those required for inhibition of PI 3-kinase.

Biological Activity: IC₅₀ = 5 nM with purified preparations and cell fractions.

IC₅₀ = 50 nM by measuring PIP₃ and superoxide production by guinea pig neutrophils.

Solubility: Soluble in DMSO at a concentration of 50 mg/mL and in ethanol at a concentration of 25 mg/mL.

Sterility: This product is not sterile.

Storage: Store, as supplied, at -20°C. Make solutions fresh, immediately before use. Do not store solutions.

Expiration Date: Expires one year from date of receipt when stored as instructed.

Related Products: Akt/PKB [pS⁴⁷³] antibody, Cat. # 44-622G

ERK1&2 [pTpY^{185/187}] antibody, Cat. # 44-680G

Caution: Avoid contact with eyes, skin, and mucous membranes. Wear protective clothing when handling this product. Not for human use.








References: Arcaro, A. and M.P. Wymann (1993) Wortmannin is a potent phosphatidylinositol 3-kinase inhibitor: the role of phosphatidylinositol 3,4,5-trisphosphate in neutrophil responses. *Biochem. J.* 296(Pt 2):297-301.

Goel, H.L. and C.S. Dey (2002) Insulin stimulates spreading of skeletal muscle cells involving the activation of focal adhesion kinase, phosphatidylinositol 3-kinase and extracellular signal regulated kinases. *J. Cell. Physiol.* 193(2):187-198.

Haller, D., et al. (2002) IKK beta and phosphatidylinositol 3-kinase/Akt participate in non-pathogenic Gram-negative enteric bacteria-induced RelA phosphorylation and NF-kappa B activation in both primary and intestinal epithelial cell lines. *J. Biol. Chem.* 277(41):38168-38178.

Okaichi, K., et al. (2002) Low dose of wortmannin reduces radiosensitivity of human glioblastoma cells through the p53 pathway. *Oncol. Rep.* 9(4):859-862.

Explanation of symbols

Symbol	Description	Symbol	Description
	Manufacturer		Catalog number
	Use by		Temperature limitation
	Consult instructions for use		Caution, consult accompanying documents
	Batch code		

PIPHZ1301

MAN0003850 Rev 2.00 Effective Date: 22 JUL 2013

For Research Use Only. Not for use in diagnostic procedures.

Manufacturing site: 7335 Executive Way | Frederick, MD 21704 | Toll Free in USA 800.955.6288 www.lifetechnologies.com

Limited Product Warranty

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