**Wortmannin**

Phosphatidylinositol 3-kinase Inhibitor

Catalog # tlrl-wtm

For research use only

Version # 15K05-MM

**PRODUCT INFORMATION**

**Content:**
- 5 mg Wortmannin

**Storage and stability:**
- Wortmannin is provided as a translucent film and shipped at room temperature. Store at -20°C. Solid product is stable 1 year at -20°C. Wortmannin is light sensitive. Protect from light.
- Upon resuspension, prepare aliquots of Wortmannin and store at -20°C. Avoid repeated freeze-thaw cycles. Resuspended product is stable for 3 months at -20°C when properly stored.

**Quality control:**
- Purity: ≥95% (LC)
- The absence of bacterial contamination (e.g. lipoproteins and endotoxins) has been confirmed using HEK-Blue™ TLR2 and HEK-Blue™ TLR4 cells.

**DESCRIPTION**

Wortmannin is a cell-permeable, fungal metabolite that acts as a potent, selective and irreversible inhibitor of phosphatidylinositol 3-kinase (PI3K). There is increasing evidence of the involvement of PI3K in Toll-like receptor (TLR) signaling. Inhibition of PI3K with wortmannin enhances TLR-mediated inducible nitric-oxide synthase (iNOS) expression, activates NF-κB and up-regulates cytokine mRNA production. Furthermore, PI3K is required for autophagy. Autophagy is a complex pathway in which cell material can be sequestered and delivered to the lysosome for degradation. Inhibition of PI3K with wortmannin can inhibit autophagic sequestration.

**CHEMICAL PROPERTIES**

**CAS number:** 19545-26-7

**Synonym:** KY 12420

**Formula:** C23 H24 O8

**Molecular weight:** 428.4

**Solubility:** 10 mg/ml in DMSO

**Structure:**

![Structure](image)

**METHODS**

**Preparation of sterile stock solution (20 mM)**
1. Add 583 µl DMSO to 5 mg of Wortmannin.
2. Vortex until complete solubilization. Prepare aliquots and store at -20°C. Once Wortmannin is solubilized, dilutions can be prepared using aqueous buffers.

**Working concentrations:** 100 nM - 10 µM

**PROTOCOLS**

For reference only; as described in the indicated publications.

**Cell Culture Assay**

**Cells:** Human macrophages

**Working concentration:** 0.1-1 µM

**Incubation time:** 15 min

**Methods:** ELISA, RT-PCR and Western blot

**Cell Culture Assay**

**Cells:** Rat hepatocytes

**Working concentration:** 100 nM

**Incubation time:** 1 h

**Methods:** Electron microscopy to study autophagosome formation

**Cell Culture Assay**

**Cells:** PANC-1 cells

**Working concentration:** 200 nM

**Incubation time:** 1 h

**Methods:** Electron and fluorescence microscopy, immunoblotting


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