

## Wortmannin, PI3 Kinase Inhibitor

### Product Specifications

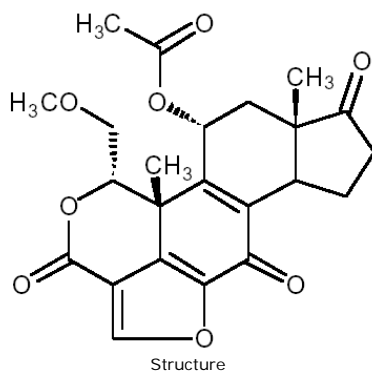
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| <b>Catalog Number:</b>    | HPK-114  |
| <b>Application Notes:</b> | This product is not sterile*<br>*The half-life of wortmannin in culture media is short (8-13minutes) <sup>7</sup> . This should be taken into account when planning experiments. |
| <b>Molecular Weight:</b>  | 428.4  |
| <b>Purity:</b>            | 98% (TLC: 100% Diethyl ether; R <sub>f</sub> = 0.29)   |
| <b>Format:</b>            | White solid, soluble in DMSO (50 mg/mL); ethanol (25 mg/mL)  |
| <b>Storage:</b>           | Store as supplied at -20°C; DO NOT STORE SOLUTIONS<br><i>Shipping conditions may differ from the recommended storage temperature</i>   |
| <b>Related Products:</b>  | KAM-PI200 PI3-Kinase, p85 $\alpha$ Monoclonal Antibody (AB6)   |

### Background:

Wortmannin, a fungal metabolite, is a potent and selective inhibitor of phosphatidylinositol 3-kinase (PI3-kinase)<sup>1</sup>. It is active in purified preparations and cytosolic fractions (IC<sub>50</sub> = 5 nM), and is highly cell permeable. It inhibits fMLP induced PIP<sub>3</sub> and superoxide anion production (IC<sub>50</sub>=50 nM) in guinea pig neutrophils<sup>2-3</sup>, and blocks the metabolic effects of insulin in isolated rat adipocytes without affecting the insulin receptor tyrosine kinase activity<sup>4</sup>. Wortmannin covalently binds to PI 3-kinase<sup>5</sup> and is selective, inhibiting other kinases such as PI 4-kinase<sup>2</sup> and myosin light chain kinase<sup>6</sup> at concentrations 100 fold higher than that required for inhibition of PI 3-kinase.

#### References:

1. Ui, M. *et al.* (1995) Trends Biochem Sci. **20**, 303-307.
2. Okada, T. *et al.* (1994) J Biol Chem. **269**, 3563-3567.
3. Arcaro, A. *et al.* (1993) Biochem J. **296**, 297-301.
4. Okada, T. *et al.* (1994) J Biol Chem. **269**, 3568-3573.
5. Wymann, M.P. *et al.* (1996) Mol Cell Biol. **16**, 1722-1733.
6. Nakanishi, S. *et al.* (1992) J Biol Chem. **267**, 2157-2163.
7. Holleran, J. *et al.* (2003) Anal Biochem. **323**, 19.



**The pharmacological and toxicological properties of this product have not been fully investigated. Exercise caution in use and handling. This product must not be used in humans.**

**FOR RESEARCH USE ONLY; NOT FOR THERAPEUTIC OR DIAGNOSTIC USE**

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