

# PRODUCT DATA SHEET

## Wortmannin

#### Code: BIA-W1224

Pack sizes: 1 mg, 5 mg



Synonyms	:	KY 12420
Specificatio	ns	

CAS #	19545-26-7	
Molecular Formula	C <sub>23</sub> H <sub>24</sub> O <sub>8</sub>	
Molecular Weight	428.4	
Source	Penicillium wortmannii	
Appearance	White solid	
Purity	> 98%	
Long Term Storage	- 20°C, protect from light	
Solubility	Soluble in ethanol, methanol, DMF or DMSO. Limited water solu	ıbility.

### **Application Notes**

Wortmannin is a steroidal metabolite belonging to the viridin group isolated from *Penicillium wortmannii* in 1957. The structure was finally solved in 1968. Wortmannin exhibits broad spectrum antifungal activity together with antitumor activity and has been reported to possess antiinflammatory activity. Wortmannin is a potent inhibitor of selected kinases, phosphoinositide 3-kinase and myosin light chain kinase. Wortmannin is also capable of neutrophil and formyl-Met-Leu-Phe-mediated phospholipase D activation, inhibition of autophagy, potentiation the LPS-induced nitric oxide (NO) production and induction of in vivo Alzheimer-like hyperphosphorylation in tau.

### References

- 1. The structure of wortmannin, a steroidal fungal metabolite. MacMillan J. et al., Chem. Commun. 1968, 613.
- 2. Activation of human neutrophil phospholipase D by three separable mechanisms. Reinhold S. et al., FASEB J. 1990, 4, 208.
- 3. Demethoxyviridin and wortmannin block phospholipase C and D activation in the human neutrophil. Bonser R.W. et al., Br. J. Pharmacol. 1991, 103, 1237.
- 4. Inhibition of IgE-mediated histamine release by myosin light chain kinase inhibitors. Kitani S. et al., BBRC 1992, 183, 48.
- 5. Wortmannin, a microbial product inhibitor of myosin light chain kinase. Nakanishi S. et al., J. Biol. Chem. 1992, 267, 2157.
- 6. Wortmannin is a potent phosphatidylinositol 3-kinase inhibitor: the role of phosphatidylinositol 3,4,5trisphosphate in neutrophil responses. Arcaro A. & Wyman M.P., Biochem. J. 1993, 296, 297.