BML-ST415         Wortmannin
PI3 kinase inhibitor

Product Number/Sizes
BML-ST415-0020  20 mg
BML-ST415-0005  5 mg
BML-ST415-0001  1 mg

Replaces Prod. #: ALX-350-020

Potent and selective inhibitor of phosphatidylinositol 3-kinase. Active in purified preparations and cytosolic fractions (IC\textsubscript{50} = 5nM) and is highly cell permeable. Inhibits IMLP induced PI\textsubscript{3} and superoxide anion production (IC\textsubscript{50} = 50nM) in guinea pig neutrophils and blocks the metabolic effects of insulin in isolated rat adipocytes without affecting the insulin receptor tyrosine kinase activity. Covalently binds to PI 3-kinase and is selective, inhibiting other kinases such as PI 4-kinase and myosin light chain kinase at concentrations 100-fold higher than that required for inhibition of PI 3-kinase. The half-life of wortmannin in culture media is quite short (8-13 minutes), care should be taken to account for this decomposition when planning experiments. Markedly potentiates the LPS-induced nitric oxide (NO) production from macrophages. Induces in vivo Alzheimer-like hyperphosphorylation in tau.

Product Specifications
Alternative Name: KY 12420
FORMULA: C\textsubscript{23}H\textsubscript{12}O\textsubscript{8}
MW: 428.4
PURITY: \geq 98% (TLC)
APPEARANCE: White to off-white solid.
CAS: 19545-26-7
MI: 14: 10053
RTECS: CB9641000
SOLUBILITY: Soluble in DMSO (50mg/ml), methanol (5mg/ml) or 100% ethanol (25mg/ml).
LONG TERM STORAGE: -20°C
USE/STABILITY: Make solutions fresh immediately before use. DO NOT STORE SOLUTIONS.
HAZARD: VERY TOXIC.

Product Literature References
Wortmannin, a specific inhibitor of phosphatidylinositol-3-kinase, enhances LPS-induced NO production from murine peritoneal macrophages Y.C. Park, et al. BBRC 240 692 (1997)


Wortmannin, a specific phosphatidylinositol 3-kinase inhibitor, inhibits adipocytic differentiation of 3T3-L1 cells K. Tamiyama, et al. BBRC 212 263 (1995)


Effects of wortmannin on increased glucose transport by insulin and norepinephrine in primary culture of brown adipocytes Y. Shimizu & T. Shimazu BBRC 202 660 (1994)


Wortmannin is a potent phosphatidylinositol 3-kinase inhibitor: the role of phosphatidylinositol 3,4,5-trisphosphate in neutrophil responses A. Arcaro & M.P. Wyman Biochem. J. 296 297 (1993)

Inhibition of IgE-mediated histamine release by myosin light chain kinase inhibitors S. Kitani, et al. BBRC 183 48 (1992)


Activation of human neutrophil phospholipase D by three separable mechanisms S.I. Reinhold, et al. FASEB J. 4 208 (1990)

Background/Technical Information

Please click here for the comprehensive product data sheet.

Replacement for ADI-HPK-114

Revised 24-Feb-12

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN, DIAGNOSTICS OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA: This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet.

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