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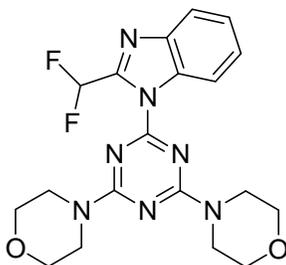
## Technical Data Sheet

### For research use only

Not intended or approved for  
diagnostic or therapeutic use.

**Product Name:** ZSTK474

**Product Number:** B-0307



**Molecular Formula:** C<sub>19</sub>H<sub>21</sub>F<sub>2</sub>N<sub>7</sub>O<sub>2</sub> **MW:** 417.41 **CAS:** 475110-96-4

**Solubility:** CHCl<sub>3</sub>, DMSO

**Storage:** -20 °C

**Field of Interest:** ZSTK474 is a potent inhibitor of all four isoforms of class I PI 3-kinase ( $\alpha$ : 6.7 nM,  $\beta$ : 10.4 nM,  $\gamma$ : 11.7 nM,  $\delta$ : 1.8 nM). It binds to the ATP-binding pocket and is more active and less toxic than LY294002. ZSTK474 shows anti-tumor activity against human xenografts (A549, PC-3, WiDr) in mice by arresting cell growth. In addition, it was able to inhibit osteoclast formation and collagen-induced arthritis in a mouse model.

**References:** 1) S. Yaguchi, *et al.* "Antitumor Activity of ZSTK474, a New Phosphatidylinositol 3-Kinase Inhibitor" *J. Nat. Cancer Inst.* **2006**, *98*, 545-556, 2) D. Kong & T. Yamori "ZSTK474 is an ATP-competitive Inhibitor of Class I Phosphatidylinositol 3-Kinase Isoforms" *Cancer Sci.*, **2007**, *98*, 1638-1642, 3) S. Toyama, *et al.* "Inhibitory" Effects of ZSTK474, a Novel Phosphoinositide 3-Kinase Inhibitor, on Osteoclasts and Collagen-induced Arthritis in Mice" *Arthritis Res. Ther.*, **2010**, *12*, R92.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. ZSTK474 is manufactured and shipped only in small quantities, intended for research and development in a laboratory utilizing prudent procedures for handling chemicals of unknown toxicity, under the supervision of persons technically qualified to evaluate potential risks and authorized to enforce appropriate health and safety measures. As with all research chemicals, precautions should be taken to avoid unnecessary exposures or risks.

**Warranty and Disclaimer:** Echelon warrants the product conforms to the specifications stated herein. In the event of nonconformity, Echelon will replace products or refund purchase price, at its sole option, and Echelon shall not be responsible for any other loss or damage, whether known or foreseeable to Echelon. No other warranties apply, express or implied, including but not limited to warranty of fitness for any purpose or implied warranty of merchantability. Purchaser is solely responsible for all consequences of its use of the product and Echelon assumes no responsibility therefore, including success of purchaser's research and development, or health or safety of any uses of the product.