

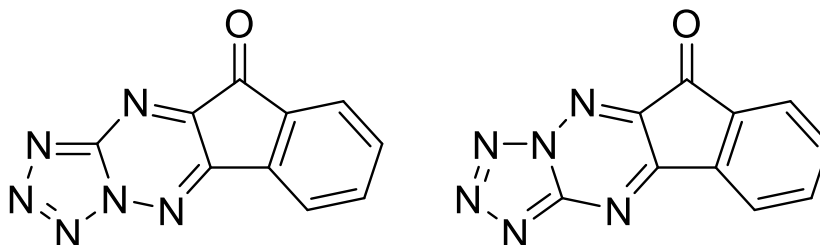
## KP372-1 (multiple kinase inhibitor: PDK1, Akt, Flt3)

Catalog number: B-0102

Molecular Formula: C<sub>10</sub>H<sub>4</sub>N<sub>6</sub>O

MW: 224.2 (1:1 mixture of isomers)

CAS: 329710-24-9



Solubility: water: insoluble, DMSO: 5 mg/mL

Storage and Handling: Store dry at 4–8 °C. Stock solutions should be stored frozen (–20 °C or below).

**Background:** KP372-1 directly inhibits the kinase activities of Akt, PDK1, and Flt3 (Fms-like tyrosine kinase 3) which are aberrantly activated in acute myelogenous leukemia (AML). It is a cell permeant inhibitor which decreases the colony-forming ability of AML cells (IC<sub>50</sub> < 200 nM) with minimal cytotoxic effects on normal hematopoietic progenitor cells. KP372-1 has also been shown to suppress cell proliferation and induce apoptosis in thyroid cancer cells and glioblastoma.

**References:** 1) M. Mandal *et al.* "The Akt Inhibitor KP372-1 Suppresses Akt Activity and Cell Proliferation and Induces Apoptosis in Thyroid Cancer Cells" *Br. J. Cancer*, 2005, *92*, 1899–1905. 2) Z. Zeng *et al.* "Simultaneous Inhibition of PDK1/AKT and Fms-Like Tyrosine Kinase 3 Signaling by a Small-Molecule KP372-1 Induces Mitochondrial Dysfunction and Apoptosis in Acute Myelogenous Leukemia." *Cancer Res.*, 2006, *66*, 3737–3746. 3) Pesta, D. *et al.* "Hypophosphatemia promotes lower rates of muscle ATP synthesis" *FASEB J.* 2016, *30*, 3378–3387 4) Zhao, Y. *et al.* "SoNar, a Highly Responsive NAD<sup>+</sup>/NADH Sensor, Allows High-Throughput Metabolic Screening of Anti-tumor Agents" *Cell Metabolism*, 2015, *21(5)*, 777–789.

**Hazardous Properties and Cautions:** The toxicological and pharmacological properties of this compound are not fully known. For further information see the MSDS on request. This product 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.

