

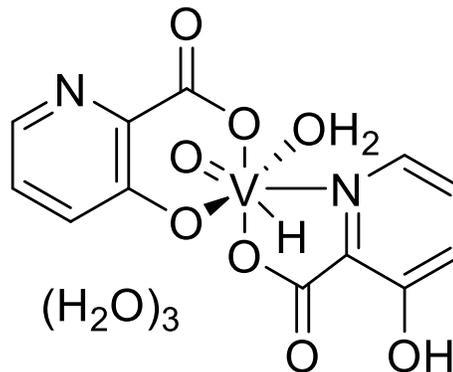
## VO-OHpic (PTEN inhibitor)

Catalog number: B-0351

Molecular Formula:  $C_{12}H_{10}N_2O_8V + 3H_2O$

MW: 415.2

CAS: 476310-60-8



Alternate Name: (OC-6-45)-aqua(3-hydroxy-2-pyridinecarboxylato-κN<sup>1</sup>,κO<sup>2</sup>)[3-(hydroxy-κO)-2-pyridinecarboxylato(2-)-κO<sup>2</sup>]oxo-vanadate(1-), hydrogen, trihydrate

Solubility: 10 mg/mL DMSO

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

**Background:** The vanadium complex VO-OHpic is a potent, reversible, allosteric inhibitor of phosphatase and tensin homologue deleted on chromosome 10 (PTEN) which hydrolyzes the 3-phosphate from phosphatidylinositol 3,4,5-trisphosphate (PIP<sub>3</sub>). PIP<sub>3</sub>, formed from PI(4,5)P<sub>2</sub> through phosphorylation by PI 3-kinase, activates numerous signaling pathways resulting in cell proliferation, growth, survival, glucose transport and protein synthesis. VO-OHpic is selective for PTEN (IC<sub>50</sub>~35 nM) compared with other cysteine-based phosphatases (PTPβ, SAC, MTM, & SopB, IC<sub>50</sub>>4 μM). Treatment of insulin-stimulated NIH 3T3 and L1 fibroblasts caused an increase in Akt-phosphorylation indicating inhibition of PTEN *in vivo*.

**References:** 1) Rosivatz, E. *et al.* "A small-molecule inhibitor for phosphatase and tensin homologue deleted on chromosome 10 (PTEN) *ACS Chem Biol.* 2006, 1, 780-790. 2) Mak, L.H. *et al.* "Characterisation of the PTEN inhibitor VO-OHpic" *J. Chem. Biol.* 2010, 3, 157-163.

**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.

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