

PRODUCT INFORMATION



VO-OHpic (hydrate)

Item No. 10009965

CAS Registry No.: 476310-60-8
Formal Name: (OC-6-45)-aqua(3-hydroxy-2-pyridinecarboxylato-κN¹,κO²)[3-(hydroxy-κO)-2-pyridinecarboxylato(2-)-κO²]oxo-vanadate(1-), hydrogen, trihydrate

MF: C₁₂H₉N₂O₈V • H [3H₂O]

FW: 415.2

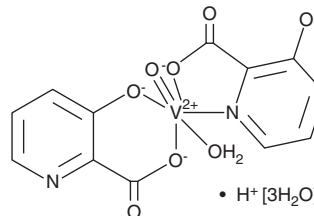
Purity: ≥95%

UV/Vis.: λ_{max}: 303 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

VO-OHpic (hydrate) is supplied as a crystalline solid. Aqueous solutions of VO-OHpic (hydrate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of VO-OHpic (hydrate) in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

VO-OHpic is a specific inhibitor of phosphatase and tensin homolog (PTEN; IC₅₀ = 35 nM *in vitro*).^{1,2} Through this action, it increases cellular phosphatidylinositol 3,4,5-trisphosphate (PIP₃) levels, phosphorylation of Akt, and glucose uptake in adipocytes.² In mice, VO-OHpic (10 μg/kg, i.p.) decreases left ventricular systolic pressure and heart rate and protects against ischemia/reperfusion-induced myocardial infarction.³ VO-OHpic also blocks the development of suppressor activity in regulatory T cells activated with indoleamine 2,3-dioxygenase.⁴

References

1. Rosivatz, E., Matthews, J.G., McDonald, N.Q., *et al.* A small-molecule inhibitor for phosphatase and tensin homologue deleted on chromosome 10 (PTEN). *ACS Chem. Biol.* **1**(12), 780-790 (2006).
2. Mak, L.H., Vilar, R. and Woscholski, R. Characterisation of the PTEN inhibitor VO-OHpic. *J. Chem. Biol.* **3**(4), 157-163 (2010).
3. Zu, L., Shen, Z., Wesley, J., *et al.* PTEN inhibitors cause a negative inotropic and chronotropic effect in mice. *Eur. J. Pharmacol.* **650**(1), 298-302 (2011).
4. Sharma, M.D., Shinde, R., McGaha, T.L., *et al.* The PTEN pathway in Tregs is a critical driver of the suppressive tumor microenvironment. *Sci. Adv.* **1**(10), e1500845 (2015).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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