1-Naphthaleneacetic acid potassium salt

Cat. No.: HY-18570A

CAS No.: 15165-79-4

Molecular Formula: $C_{12}H_9KO_2$

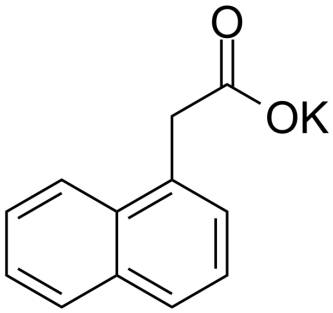
Molecular Weight: 224.3

Target: Phospholipase

Pathway: Metabolic Enzyme/Protease

Storage: 4°C, sealed storage, away from moisture

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (222.92 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	4.4583 mL	22.2916 mL	44.5831 mL
	5 mM	0.8917 mL	4.4583 mL	8.9166 mL
	10 mM	0.4458 mL	2.2292 mL	4.4583 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

1-Naphthaleneacetic acid potassium salt (Potassium 1-Naphthaleneacetate), a synthetic auxin, can promote plant growth. 1-Naphthaleneacetic acid potassium salt is also an inhibitor of PLA_2, with an IC_{50} of 13.16 μM[1][2].

IC_{50} & Target

PLA2
13.16 μM (IC_{50})

In Vitro

1-Naphthaleneacetic acid (0.7-14 μM) inhibits the activity of PLA_2, with the K_i and IC_{50} of 6.87 μM and 13.16 μM, respectively [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gómez DA, et al. Effect of 1-naphthaleneacetic acid on organic acid exudation by the roots of white lupin plants grown under phosphorus-deficient conditions. J Plant Physiol. 2014 Sep 15;171(15):1354-61.

[2]. Dileep KV, et, al. Crystal structure of phospholipase A 2 in complex with 1-naphthaleneacetic acid. IUBMB Life. 2018 Oct;70(10):995-1001.

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