nor-NOHA monoacetate

Cat. No.: HY-112885B

CAS No.: 2250019-93-1

Molecular Formula: $C_7H_{16}N_4O_5$

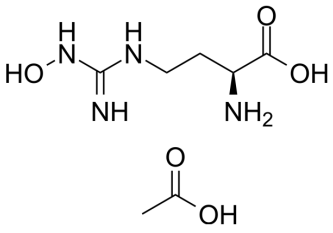
Molecular Weight: 236.23

Target: Arginase

Pathway: Immunology/Inflammation; 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 : 100 mg/mL (423.32 mM; Need ultrasonic)

H_2O : 50 mg/mL (211.66 mM; Need ultrasonic)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	4.2332 mL	21.1658 mL	42.3316 mL
5 mM	0.8466 mL	4.2332 mL	8.4663 mL
10 mM	0.4233 mL	2.1166 mL	4.2332 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (423.32 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (10.58 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

nor-NOHA monoacetate is a selective and reversible arginase inhibitor. nor-NOHA monoacetate induces apoptosis in ARG2-expressing cells under hypoxia. nor-NOHA monoacetate has anti-leukemic activity. nor-NOHA monoacetate can used in study of endothelial dysfunction, immunosuppression and metabolism[1].

In Vitro

nor-NOHA monoacetate (0.1-1 mM, 72 h) induces apoptosis in a dose-dependent manner under hypoxia (1.5% O_2) in K562 cells[1].

	nor-NOHA monoacetate (1 mM, 72 h) attenuates hypoxia-mediated resistance towards imatinib in K562 or KCL22 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	nor-NOHA monoacetate (100 mg/kg, i.v., once time) induces a significant reduction of infarct size in male Sprague-Dawley rats[2]. nor-NOHA monoacetate (100 mg/kg, i.v., once time) increases plasma citrulline and nitrite levels and decreases the ornithine plasma levels in male Sprague-Dawley rats[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Front Cell Dev Biol. 2021 Dec 23;9:741911.

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REFERENCES

[1]. Ng KP, et al. The arginase inhibitor Nω-hydroxy-nor-arginine (nor-NOHA) induces apoptosis in leukemic cells specifically under hypoxic conditions but CRISPR/Cas9 excludes arginase 2 (ARG2) as the functional target. PLoS One. 2018 Oct 11;13(10):e0205254.

[2]. Jung C, et al. Arginase inhibition mediates cardioprotection during ischaemia-reperfusion. Cardiovasc Res. 2010 Jan 1;85(1):147-54.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA