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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Sulcotrione

Cat. No.: HY-107368

CAS No.: 99105-77-8

Molecular Formula: $C_{14}H_{13}ClO_5S$

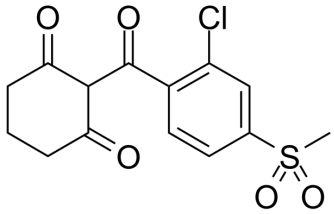
Molecular Weight: 328.77

Target: Reactive Oxygen Species

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (304.16 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0416 mL	15.2082 mL	30.4164 mL
	5 mM	0.6083 mL	3.0416 mL	6.0833 mL
	10 mM	0.3042 mL	1.5208 mL	3.0416 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 (7.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.60 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Sulcotrione is a β-triketone herbicide which can inhibit hydroxyphenylpyruvate dioxygenase (HPPD).

IC_{50} & Target

HPPD[1]

In Vitro

The results show that sulcotrione behaves as time-independent reversible inhibitor. Similar results are previously described for natural β-triketones, and for the synthetic β-triketone NTBC. However it is the first time that such behavior is observed using a purified hydroxyphenylpyruvate dioxygenase (HPPD) and a synthetic β-triketone, namely sulcotrione. Inhibition

kinetic analysis, performing with 3 hydroxyphenylpyruvate (HPP) and sulcotrione concentrations, show that the apparent K_M increasing with sulcotrione concentration. This behavior is consistent with the data present in the literature, describing sulcotrione as a competitive inhibitor of HPPD[1].

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

PROTOCOL

Kinase Assay [1]

Electrochemical behavior of sulcotrione at 0.2 mg/L is characterized by cyclic voltammetry. Preliminary HPPD inhibition assays are performed by incubating the enzyme during time periods ranging from 2 to 10 min in presence of sulcotrione at differnt concentrations[1].

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

REFERENCES

[1]. Rocaboy-Faquet E, et al. A novel amperometric biosensor for ß-triketone herbicides based on hydroxyphenylpyruvatedioxygenase inhibition: A case study for sulcotrione. Talanta. 2016;146:510-6.

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