

Product Data Sheet

Product Name: Sulcotrione

Cat. No.: GC30532

Chemical Properties

Cas. No. 99105-77-8

SMILES O=C(C1C(CCCC1=O)=O)C2=C(C=C(S(C)(=O)=O)C=C2)Cl

Formula $C_{14}H_{13}ClO_5S$ M.Wt 328.77

Solubility DMSO : 100 mg/mL (304.16 mM) Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

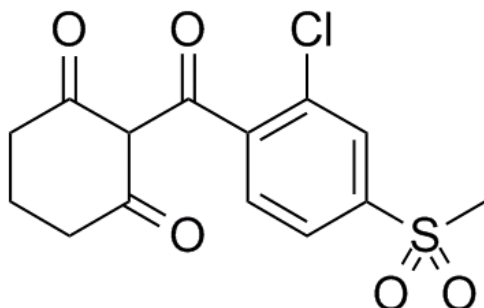
Caution: Product has not been fully validated for medical applications. For research use only.

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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Structure



Protocol

Kinase experiment:

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 different concentrations[1].

References:

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

Background

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Background

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

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].

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

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