

Product Data Sheet

Product Name: 2,4-Dichlorophenoxyacetic acid

Cat. No.: GD08505

Chemical Properties

Cas. No. 2702-72-9

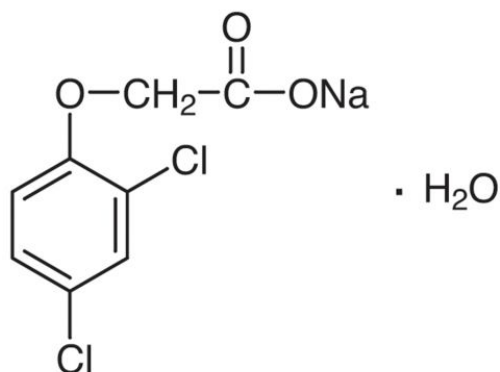
Formula $C_8H_5Cl_2NaO_3$ M.Wt 243.02

Solubility Storage Store at $-20^{\circ}C$

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

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

Structure



Background

2,4-D sodium salt (Sodium 2,4-dichlorophenoxyacetate) is a selective herbicide that can be orally active for the control of broad-leaved weeds. 2,4-D sodium salt can induce apoptosis. 2,4-D sodium salt inhibits DNA and protein synthesis, thereby preventing normal plant growth and development.

2, 4-D sodium salt (25-200 μ M, 72 h) inhibits the cell viability of A549 and WI38 with **IC₅₀** values of 126 $\pm$ 2.25 μ M and 115 $\pm$ 4.39 μ M, respectively. By influencing cell cycle, apoptosis was induced^[2].

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

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2,4-D sodium salt (100 or 200 mg/kg, gavage for 30 days) has toxic effects on the reproductive system of male rats^[3].

[1]. Germaine KJ, et al. Bacterial endophyte-enhanced phytoremediation of the organochlorine herbicide 2,4-dichlorophenoxyacetic acid. FEMS Microbiol Ecol. 2006 Aug;57(2):302-10.

[2]. Ganguli A, et al. 2, 4-Dichlorophenoxyacetic acid induced toxicity in lung cells by disruption of the tubulin-microtubule network. Toxicology Research, 2014, 3(2): 118-130.

[3]. Marouani N, et al. Effects of oral administration of 2,4-dichlorophenoxyacetic acid (2,4-D) on reproductive parameters in male Wistar rats. Environ Sci Pollut Res Int. 2017 Jan;24(1):519-526.

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