

Product Data Sheet

Product Name: Prohexadione

Cat. No.: GC49116

Chemical Properties

Cas. No. 88805-35-0

SMILES O=C(C1CC(C(C1)=O)C(CC)=O)=O)O

Formula C₁₀H₁₂O₅

M.Wt 212.2

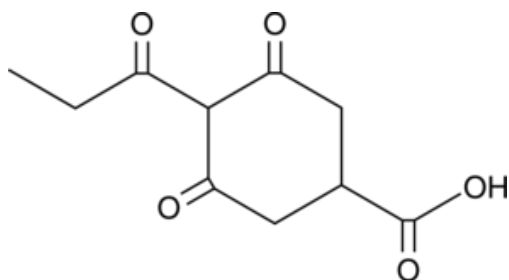
Solubility Chloroform: soluble

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.

Structure



Background

Prohexadione is a plant growth regulator.¹ It inhibits the gibberellin plant hormone biosynthesis enzyme 3β-hydroxylase when used at concentrations of 0.1, 1, and 10 mM. It reduces the shoot length of peanut plants when applied at 0.5, 1.5, and 4.5 kg/hectare. Prohexadione also inhibits jumonji domain-containing 2A (JMJD2A) demethylase when used at a concentration of 1 mM and induces the differentiation of mouse neurospheres into neurons at 1, 1.5, and 2 mM.² Formulations containing prohexadione have been used as plant growth regulators in agriculture.

1. Brown, R.G.S., Kawaide, H., Yang, Y.-Y., et al. Daminozide and prohexadione have similar modes of action as inhibitors of the late stages of gibberellin metabolism. *Physiol. Plant.* 101(2):309-313 (1997)

2. Vavilala, D.T., Reddy, S., Sachchidanand, et al. Prohexadione, a plant growth regulator, inhibits histone lysine demethylases and modulates epigenetics. *Toxicol. Rep.* 11:1152-1161 (2014)

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

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