Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Orotic acid

Catalog No: tcsc2314

Available Sizes

Size: 100mg

Size: 500mg

Specifications

CAS No:
65-86-1

Formula:
$C_5H_4N_2O_4$

Pathway:
Cell Cycle/DNA Damage;Metabolic Enzyme/Protease

Target:
Nucleoside Antimetabolite/Analog;Endogenous Metabolite

Purity / Grade:
>98%

Solubility:
DMSO : 32 mg/mL (205.00 mM; Need ultrasonic and warming)

Alternative Names:
6-Carboxyuracil;Vitamin B13

Observed Molecular Weight:
156.1

Product Description

Orotic acid (OA) is an intermediate in pyrimidine metabolism.

Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

IC50 Value:

Target: Nucleoside antimetabolite/analog

in vitro: OA increases cell proliferation and decreases apoptosis in serum-starved SK-Hep1 hepatocellular carcinoma cells, which may ascribe to the inhibition of AMP-activated protein kinase (AMPK) phosphorylation and thus activation of mammalian target of rapamycin complex 1 (mTORC1) [1].

in vivo: male Fischer 344 rats (130-150 g) to two-thirds PH in the absence or in the presence of OA (a 300-mg tablet of OA methyl ester implanted intraperitoneally at the time of two-thirds PH). treatment with OA resulted in a near-100% inhibition of RNR induced by two-thirds PH in rat liver, as monitored by enzyme activity and protein level [2]. The increases of hepatic OA and betaine levels in OA feeding rats was also found when compared to the normal rats [3]. Feeding 1% OA with diet decreased the phosphorylation of AMPK and increased the maturation of SREBP-1 and the expression of SREBP-responsive genes in the rat liver. OA-induced lipid accumulation was also completely inhibited by rapamycin. Mouse hepatocytes and mice were resistant to OA-induced lipogenesis because of little if any response in AMPK and downstream effectors [4].