

Orobol

Chemical Properties

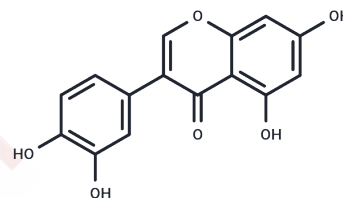
CAS No. : 480-23-9

Formula: C₁₅H₁₀O₆

Molecular Weight: 286.24

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



Biological Description

Description	Orobol (3',4',5,7-tetrahydroxy-isoflavone) is an inhibitor of tyrosine-specific protein kinase and phosphatidylinositol turnover. Orobol inhibits PI3K isoforms with IC50s of 3.46-5.27 μ M for PI3K $\alpha/\beta/\gamma/K/\delta$. Orobol exhibits anti-skin-aging and anti-obesity effects.
Targets(IC50)	Bcl-2 Family, Casein Kinase, Caspase, PI3K, VEGFR
In vitro	Orobol inhibits CK1 ϵ , VEGFR2, MAP4K5, MNK1, MUSK, TOPK, and TNIK with IC50s of 1.24-4.45 μ M. Orobol (5-20 μ M) effectively suppresses MDI (isobutylmethylxanthine, dexamethasone, and insulin (MDI))-induced phosphorylation of 4E-BP1. Orobol binds to CK1 ϵ in an ATP-competitive manner[3].
In vivo	In C57BL/6J mice, Orobol (10mg/kg; intragastrically) attenuates high-fat diet-induced weight gain (17.3%) and lipid accumulation without affecting food intake[3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.4936 mL	17.4679 mL	34.9357 mL
5 mM	0.6987 mL	3.4936 mL	6.9871 mL
10 mM	0.3494 mL	1.7468 mL	3.4936 mL
50 mM	0.0699 mL	0.3494 mL	0.6987 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Tomonaga T, et al. Isoflavonoids, genistein, psi-tectorigenin, and orobol, increase cytoplasmic free calcium in isolated rat hepatocytes. *Biochem Biophys Res Commun*. 1992 Jan 31;182(2):894-9.

Kim MH, et al. Lipid Nanoparticles for Enhancing the Physicochemical Stability and Topical Skin Delivery of Orobol. *Pharmaceutics*. 2020;12(9):845. Published 2020 Sep 3.

Yang H, et al. Orobol, an Enzyme-Convertible Product of Genistein, exerts Anti-Obesity Effects by Targeting Casein Kinase 1 Epsilon. *Sci Rep*. 2019 Jun 20;9(1):8942.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481