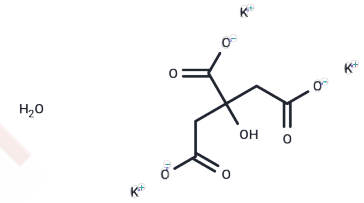
Data Sheet (Cat.No.T11589)

TargetMol

Hydroxycitric acid tripotassium hydrate

Chemical Properties



CAS No. : 6100-05-6

Formula: C6H7K3O8

Molecular Weight: 324.41

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	Hydroxycitric acid tripotassium hydrate (Potassium citrate monohydrate) is the major active ingredient of Garcinia cambogia and a derivative of citric acid, which effectively inhibits stone formation and HIF, and has antioxidation, anti-inflammation, and anti-tumor effects. It also competitively inhibits ATP citrate lyase, offering weight loss benefits.
Targets(IC50)	Apoptosis,ATP Citrate Lyase,HIF/HIF Prolyl-Hydroxylase,Endogenous Metabolite, Antibacterial,HIF
In vitro	Hydroxycitric acid suppresses HIF-1α protein expression increased by CoCl2 administration in ARPE19 cells and 661W cells. Hydroxycitric acid decreases the accumulation of lipid droplets and accelerated energy metabolism in chicken hepatocytes. Hydroxycitric acid protects the cells from ER stress by increasing the antioxidant status and mitochondrial functions.Hydroxycitric acid shows an HIF inhibitory effect compared with the control group in ARPE19 cells and 661W cells. Hydroxycitric acid can downregulate Hif1a and the downstream genes in ARPE19 cells and 661W cells.
In vivo	Hydroxycitric acid attenuates the oxidative stress induced by calcium oxalate crystallization. Hydroxycitric acid has inhibitory effects on calcium oxalate-induced inflammatory cytokines, such as MCP-1, IL-1 β, and IL-6. Moreover, Hydroxycitric acid alleviates tubular injury and apoptosis caused by calcium oxalate crystals. The administration of Hydroxycitric acid can suppress body weight gain and fat accumulation in animals. Hydroxycitric acid (100-200 mg/kg) treatment could reduce markers of renal impairment (Blood Urea Nitrogen and serum creatinine). Calcium oxalate crystal deposition in mice (male C57BL/6J mice) treated with Hydroxycitric acid is significantly decreased.

Solubility Information

Solubility	DMSO: 2.49 mg/mL (7.68 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0825 mL	15.4126 mL	30.8252 mL
5 mM	0.6165 mL	3.0825 mL	6.165 mL
10 mM	0.3083 mL	1.5413 mL	3.0825 mL
50 mM	0.0617 mL	0.3083 mL	0.6165 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

Liu X, et al. Hydroxycitric acid inhibits renal calcium oxalate deposition by reducing oxidative stress and inflammation. Curr Mol Med. 2020 Jan 3.
Ibuki M, et al. Therapeutic Effect of Garcinia cambogia Extract and Hydroxycitric Acid Inhibiting Hypoxia-Inducible Factor in a Murine Model of Age-Related Macular Degeneration. Int J Mol Sci. 2019 Oct 11;20(20). pii: E5049.
Han S, et al. Hydroxycitric Acid Tripotassium Inhibits Calcium Oxalate Crystal Formation in the Drosophila Melanogaster Model of Hyperoxaluria. Med Sci Monit. 2019 May 17;25:3662-3667.
Heymsfield SB, et al. Garcinia cambogia (hydroxycitric acid) as a potential antiobesity agent: a randomized controlled trial. JAMA. 1998 Nov 11;280(18):1596-600.

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