

3'-Oxolutein

Chemical Properties

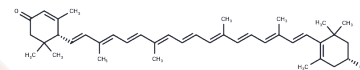
CAS No. : 23984-55-6

Formula: C40H54O2

Molecular Weight: 566.86

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	3'-Oxolutein, a metabolite of dietary lutein, acts as an anti-inflammatory and antioxidant agent. It reduces glutamate-induced reactive oxygen species (ROS) production and the secretion of pro-inflammatory cytokines in SH-SY5Y cells. Additionally, 3'-Oxolutein decreases glutamate-induced iron levels and increases thiol levels. This compound is useful for inflammation-related research.
Targets(IC50)	Endogenous Metabolite,ROS
In vitro	3'-Oxolutein (10 ng/μL, 10-30 min) significantly reduces the production of reactive oxygen species (ROS) induced by glutamate in SH-SY5Y cells. When applied for 24-72 hours, 3'-Oxolutein increases small molecule antioxidant levels at 48 hours but does not alter the total antioxidant capacity (TAC) in glutamate-treated SH-SY5Y cells. Additionally, treatment with 3'-Oxolutein (10 ng/μL, 24-72 h) alone does not affect superoxide dismutase (SOD) activity nor prevent the decrease in SOD activity in glutamate-treated SH-SY5Y cells. It can, however, reduce iron content and decrease mRNA expression of the ALOX5, ALOX15, and ACSL4 genes induced by glutamate in SH-SY5Y cells. Furthermore, 3'-Oxolutein (10 ng/μL, 24-72 h) does not significantly impact IL-6 secretion but reduces glutamate-induced IL-8 secretion and decreases TNFα levels in SH-SY5Y cells.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7641 mL	8.8205 mL	17.641 mL
5 mM	0.3528 mL	1.7641 mL	3.5282 mL
10 mM	0.1764 mL	0.8821 mL	1.7641 mL
50 mM	0.0353 mL	0.1764 mL	0.3528 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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