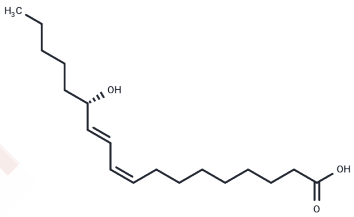
Data Sheet (Cat.No.T37974)

TargetMol

(S)-Coriolic acid

Chemical Properties



CAS No. : 29623-28-7

Formula: C18H32O3

Molecular Weight: 296.44

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	(S)-Coriolic acid (13(S)-HODE) is an important intracellular signaling agent generated by the reaction of linoleic acid with plant and mammalian lipoxygenases. It is involved in cell proliferation and differentiation in various biological systems and inhibits the adhesion of tumor cells to the vascular endothelium, while down-regulating IRGpIIb/IIIa receptor expression at around 1 μM. Additionally, (S)-Coriolic acid is a metabolite of 15-lipoxygenase (15-LOX) and often acts as an endogenous ligand to activate PPARγ. It induces mitochondrial dysfunction and airway epithelial damage.
Targets(IC50)	Mitochondrial Metabolism,Lipoxygenase,PPAR
In vitro	(S)-Coriolic acid (30 nM; 6 h; E-FABP-/- keratinocytes) induces K1 expression through NF-κB activation. (S)-Coriolic acid also increases the phosphorylation of Ikkinase-bat tyrosine 199, which promotes IκBα phosphorylation and subsequent NF-kB activation. (S)-Coriolic acid increases the phosphorylation of IκBαat serine 32, which induces IκB degradation and thereby activates NF-κB.[3]
In vivo	(S)-Coriolic acid (0-0.6 mg; intranasal; once daily for 3 consecutive days; mouse) induces significant airway dysfunction, neutrophilia, mitochondrial dysfunction, and epithelial injury.[2]

Solubility Information

Solubility	Ethanol: >50 mg/mL (per Rao Maddipati),Sonication is recommended. DMSO: 55 mg/mL (185.54 mM),Sonication is recommended. PBS (pH 7.2): 1 mg/mL (3.37 mM),Sonication is recommended. DMF: >50 mg/mL (per Rao Maddipati),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3734 mL	16.8668 mL	33.7336 mL
5 mM	0.6747 mL	3.3734 mL	6.7467 mL
10 mM	0.3373 mL	1.6867 mL	3.3734 mL
50 mM	0.0675 mL	0.3373 mL	0.6747 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

Mabalirajan U, et al. Linoleic acid metabolite drives severe asthma by causing airway epithelial injury. Sci Rep. 2013;3:1349.
Ogawa E, et al. Epidermal FABP (FABP5) regulates keratinocyte differentiation by 13(S)-HODE-mediated activation of the NF-κB signaling pathway. J Invest Dermatol. 2011;131(3):604-612.
Yuan H, et al. 15-Lipoxygenases and its metabolites 15(S)-HETE and 13(S)-HODE in the development of non-small cell lung cancer. Thorax. 2010;65(4):321-326.
Buchanan MR, et al. 13-Hydroxyoctadecadienoic acid is the vessel wall chemorepellant factor, LOX. J Biol Chem. 1985;260(30):16056-16059.
Honn KV, et al. Fatty acid modulation of tumor cell adhesion to microvessel endothelium and experimental metastasis. Prostaglandins. 1992;44(5):413-429.