[ Product Information ]
Name: 3,4-O-Isopropylidene shikimic acid
Catalog No.: CFN99852
Cas No.: 183075-03-8
Purity: > 95%
M.F: C₁₀H₁₄O₅
M.W: 214.2
Physical Description: Powder
Synonyms: 7-Hydroxy-2,2-diMethyl-3a,6,7,7a-tetrahydrobenzo[d][1,3]dioxole-5-carboxylic acid; 3,4-Oxo-isopropylidene-shikimic acid.

[ Intended Use ]
1. Reference standards;
2. Pharmacological research;
3. Synthetic precursor compounds;
4. Intermediates & Fine Chemicals;
5. Others.

[ Source ]
The fruits of Illicium verum.

[ Biological Activity or Inhibitors ]
3,4-Oxo-isopropylidene-shikimic acid has significant anti-inflammatory effect which may be related to inhibiting the production of prostaglandin E2 and protecting free radical against oxidation.[1]

3,4-Oxo-isopropylidene-shikimic acid has protective effects on experimental colitis induced by trinitrobenzenesulfonic acid in rats, probably due to an antioxidant action.[2]

3,4-Oxo-isopropylidene-shikimic acid has anti-thrombosis effect, it inhibits thrombosis by anti-platelet-aggregation.[3]

3,4-Oxo-isopropylidene shikimic acid relieves the brain edema of rats subjected to MCAT by improving the energy metabolism and Na⁺, K⁺-ATPase activity in rat brain tissue.[4]

3,4-Oxo-isopropylidene-shikimic acid can inhibit adhesion of polymorphonuclear leukocyte to TNF-alpha-induced endothelial cells in vitro.[5]

3,4-Oxo-isopropylidene-shikimic acid has analgesic and antioxidant activities, it exhibits moderate antioxidant activity by scavenging the superoxide radical and hydroxyl radical with IC₅₀ values of 0.214 and 0.450 ug/mL, respectively.[6]

3,4-Oxo-isopropylidene-shikimic acid has exhibited ameliorative effect on cognitive impairment in experimental animal models of dementia, it can promote adipogenesis by up-regulating expressions of C/EBP β, PPAR γ, C/EBP α, aP2 and FAS, and also stimulate adipokines during adipocyte differentiation, suggests that stimulation of adipokines and cognitive enhancing effect of 3,4-oxo-isopropylidene-shikimic acid have some relationship.[7]

[ Solvent ]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

[ HPLC Method ][8]

Mobile phase: Methanol-0.03% Acetic acid=50:100;
Flow rate:1.0 ml/min;
Column temperature: Room Temperature;
The wave length of determination:220 nm.
[ Storage ]

2-8℃, Protected from air and light, refrigerate or freeze.

[ References ]


[ Contact ]

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