LKT Laboratories, Inc.

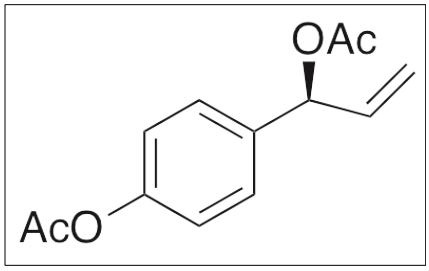
1'-S-1'-Acetoxychavicol Acetate

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

Product ID A0917
CAS No. 52946-22-2
Chemical Name [4-[(1S)-1-acetyloxyprop-2-enyl]phenyl] acetate

Synonym Galangal acetate,(-); Galangal acetate,(S);



Formula $C_{13}H_{14}O_4$
Formula Wt. 234.25
Melting Point
Purity ≥98%
Solubility Soluble in DMSO (20 mg/mL), ethanol (20 mg/mL), DMF (14 mg/mL). Insoluble in water (racemizes in the presence of moisture)

Bulk quanitites available upon request

Product ID	Size
A0917	10 mg
A0917	25 mg
A0917	100 mg

Store Temp -20°C
Ship Temp Ambient

Description 1'-(S)-1'-Acetoxychavicol acetate (galangal acetate) displays a wide variety of beneficial properties, including antioxidative, anti-obesity, antibacterial, anti-parasitic, chemopreventative, and chemotherapeutic activities. This compound is best known for its ability to inhibit xanthine oxidase, but also activates transient receptor potential cation channel A1 (TRPA1), an ion channel involved in pain and cold signaling. In vitro, 1'-(S)-1'-Acetoxychavicol acetate decreases GPDH activity and downregulates PPARγ, C/EBPα, and phosphorylated AMPK, inhibiting adipogenesis. Additionally, 1'-(S)-1'-Acetoxychavicol acetate decreases visceral fat mass in animal models. 1'-(S)-1'-Acetoxychavicol acetate displays activity against both gram negative and gram positive bacteria in vitro and anti-parasitic activity against *Leishmania donovani*. In vitro, 1'-(S)-1'-Acetoxychavicol acetate displays chemopreventive activity, inhibiting development of azoxymethane-induced colon carcinogenesis. In vivo, this compound upregulates Nrf2 and induces expression of glutathione and NADPH quinone oxidoreductase 1. 1'-(S)-1'-Acetoxychavicol acetate also increases caspase-3 activity, inducing apoptosis and cell death in cellular models of glioblastoma and oral carcinoma.

References

Williams M, Tietzel I, Quick QA. 1'-Acetoxychavicol acetate promotes caspase 3-activated glioblastoma cell death by overcoming enhanced cytokine expression. Oncol Lett. 2013 Jun;5(6):1968-1972. PMID: 23833677.

Ohnishi R, Matsui-Yuasa I, Deguchi Y, et al. 1'-acetoxychavicol acetate inhibits adipogenesis in 3T3-L1 adipocytes and in high fat-fed rats. Am J Chin Med. 2012;40(6):1189-204. PMID: 23227791.

In LL, Arshad NM, Ibrahim H, et al. 1'-Acetoxychavicol acetate inhibits growth of human oral carcinoma xenograft in mice and potentiates cisplatin effect via proinflammatory microenvironment alterations. BMC Complement Altern Med. 2012 Oct 9;12:179. PMID: 23043547.

Yaku K, Matsui-Yuasa I, Azuma H, et al. 1'-Acetoxychavicol acetate enhances the phase II enzyme activities via the increase in intranuclear Nrf2 level and cytosolic p21 level. Am J Chin Med. 2011;39(4):789-802. PMID: 21721157.

Kaur A, Singh R, Dey CS, et al. Antileishmanial phenylpropanoids from Alpinia galanga (Linn.) Willd. Indian J Exp Biol. 2010 Mar;48(3):314-7. PMID: 21046987.

Narukawa M, Koizumi K, Iwasaki Y, et al. Galangal pungent component, 1'-acetoxychavicol acetate, activates TRPA1. Biosci Biotechnol Biochem. 2010;74(8):1694-6. PMID: 20699565

Latha C, Shriram VD, Jahagirdar SS, et al. Antiplasmid activity of 1'-acetoxychavicol acetate from Alpinia galanga against multi-