

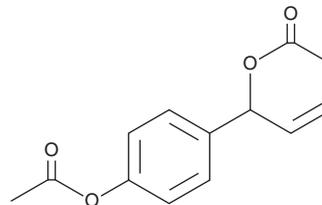
# PRODUCT INFORMATION



## D,L-1'-Acetoxychavicol Acetate

Item No. 19649

**CAS Registry No.:** 53890-21-4  
**Formal Name:** 4-(acetyloxy)- $\alpha$ -ethenyl-benzenemethanol, acetate  
**Synonyms:** ACA, 1'-Acetoxychavicol Acetate, Galangal Acetate  
**MF:** C<sub>13</sub>H<sub>14</sub>O<sub>4</sub>  
**FW:** 234.3  
**Purity:**  $\geq$ 95%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 218 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

D,L-1'-Acetoxychavicol acetate is supplied as a crystalline solid. A stock solution may be made by dissolving the D,L-1'-acetoxychavicol acetate in the solvent of choice. D,L-1'-Acetoxychavicol acetate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of D,L-1'-acetoxychavicol acetate in these solvents is approximately 20 mg/ml in ethanol and DMSO and 14 mg/ml in DMF.

D,L-1'-Acetoxychavicol acetate is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, D,L-1'-acetoxychavicol acetate should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. D,L-1'-Acetoxychavicol acetate has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

D,L-1'-Acetoxychavicol acetate is a natural compound first isolated from the rhizomes of ginger-like plants. It has a wide array of cellular effects that may be largely explained by its ability to inhibit exportin 1 and prevent the export of proteins from the nucleus.<sup>1,2</sup> In this way, D,L-1'-Acetoxychavicol acetate reduces several intracellular signaling pathways, including NF- $\kappa$ B, impacting inflammation, cancer, viral replication, and other processes.<sup>2-4</sup>

### References

1. Tamura, S., Shiomi, A., Kaneko, M., *et al.* New rev-export inhibitor from *Alpinia galanga* and structure-activity relationship. *Bioorg. Med. Chem. Lett.* **19(9)**, 2555-2557 (2009).
2. Turner, J.G., Dawson, J., and Sullivan, D.M. Nuclear export of proteins and drug resistance in cancer. *Biochem. Pharmacol.* **83(8)**, 1021-1032 (2012).
3. Murakami, A. and Ohigashi, H. Targeting NOX, INOS and COX-2 in inflammatory cells: Chemoprevention using food phytochemicals. *Int. J. Cancer* **121(11)**, 2357-2363 (2007).
4. Watanabe, K., Takatsuki, H., Sonoda, M., *et al.* Anti-influenza viral effects of novel nuclear export inhibitors from *Valeriana radix* and *Alpinia galanga*. *Drug Discov. Ther.* **5(1)**, 26-31 (2016).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/19/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM