Natural Products

ChemFaces

Diallyl disulfide Datasheet

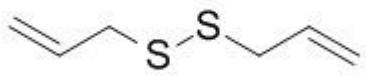
4th Edition (Revised in July, 2016)

[Product Information]

Name: Diallyl disulfide

Catalog No.: CFN93237

Cas No.: 2179-57-9



Purity: >=90%

M.F: $C_6H_{10}S_2$

M.W: 146.27

Physical Description: Oil

Synonyms: Allyl disulfide;Di-2-propenyl disulfide.

[Intended Use]

1. Reference standards;

2. Pharmacological research;

3. Synthetic precursor compounds;

4. Intermediates & Fine Chemicals;

5. Others.

[Source]

The bulbs of *Allium sativum L.*

[Biological Activity or Inhibitors]

Diallyl disulfide (DADS) is an oil-soluble organosulfur compound found in garlic, it has

growth inhibitory effects on human breast cancer cell line, it could be a promising anticancer agent for both hormone-dependent and -independent breast cancers, and may harmonize with polyunsaturated fatty acids known as modulators of breast cancer cell growth.[1]

Diallyl disulfide inhibits the proliferation of human blood, colon, lung and skin cancer cells, it also inhibits WEHI-3 leukemia cells in vitro and in vivo.[2]

Diallyl disulfide down-regulates telomerase activity through c-Myc-, Sp-1-, and Mad1-dependent transcriptional down-regulation of human telomerase reverse transcriptase (hTERT), it plays a role in treatment of human lymphoma. [3]

Diallyl disulfide has antioxidant properties, it also has a renoprotective effect in gentamicin-induced acute renal failure in rats may be related, at least in part, to the amelioration in the oxidative stress and the preservation in the activity of the antioxidant enzymes in kidney.[4]

[Solvent]

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

[HPLC Method][5]

Mobile phase: Methanol- 0.17% Formic acid H2O=80:20 ;

Flow rate: 1.0 ml/min;

Column temperature: 35 ℃;

The wave length of determination: 240 nm.

[Storage]

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

[References]

[1] Nakagawa H, Tsuta K, Kiuchi K, *et al. Carcinogenesis, 2001, 22(6):891-7.*

[2] Yang J S, Kok LFLin Y H, Kuo T C, *et al. Anticancer Res., 2006, 26(1A):219-25.*

[3] Dasgupta P, Bandyopadhyay S S. *Nutrition, 2015, 31(7-8):1031–7.*

[4] Pedraza-Chaverrí J, González-Orozco AE, Maldonado P D, *et al. Eur. J.Pharmacol. 2003, 473(1):71-8.*

[5] Zhang Q H, Ding J X, Liu L M.*Chinese Journal of Information on Tcm, 2005, 12(10):43-4.*

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