



LKT Laboratories, Inc.

Allyl Disulfide

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Product Information

Product ID A4544

CAS No. 2179-57-9

Chemical Name Diallyl disulfide

Synonym 2-Propenyl disulfide, 2-Propenyl disulphide, 4,5-Dithia-1,7-octadiene, AI3-35128, Allyl disulphide, BRN 1699241, CCRIS 6290, Di(2-propenyl) disulfide, Diallyl disulphide, Disulfide, di-2-propenyl

Formula C₆H₁₀S₂

Formula Wt. 146.28

Melting Point -24.4 °C

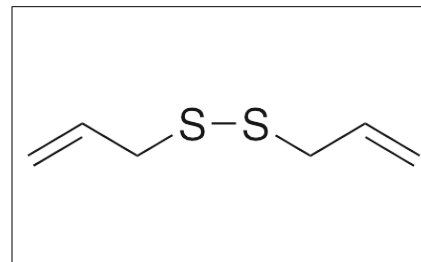
Purity ≥98%

Solubility Soluble in ethanol (3 mg/mL), oil, DMSO (5 mg/mL), DMF (10 mg/mL), chloroform, methanol. Insoluble in water.

Store Temp -20 °C

Ship Temp Ambient

Description Allyl disulfide is an organosulfur originally found in garlic that exhibits antioxidative, antiviral, neuroprotective, anti-parasitic, anticancer, and anti-hyperlipidemic activities. Allyl disulfide induces phase II enzymes, inhibits lipid peroxidation, and acts as a radical scavenger. In vitro, allyl disulfide inhibits proliferation of HIV-1, and in vivo, it suppresses growth of *Gyrodactylus*. In other cellular models, allyl disulfide inhibits 4α-methyl oxidase, suppressing cholesterol synthesis. In Drosophila models of Parkinson's disease, this compound decreases α-synuclein aggregate-induced neuronal death. In leukemia cells, allyl disulfide induces G2/M phase cell cycle arrest and apoptosis, increases levels of p21, release of cytochrome c, and activation of caspase 3 and PARP, and decreases activation of NF-κB.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
A4544	500 mg	\$129.90
A4544	1 g	\$245.70
A4544	5 g	\$923.10

References Schelkle B, Snellgrove D, Cable J. In vitro and in vivo efficacy of garlic compounds against *Gyrodactylus turnbulli* infecting the guppy (*Poecilia reticulata*). *Vet Parasitol.* 2013 Nov 15;198(1-2):96-101. PMID: 24074607.

Dasgupta P, Bandyopadhyay SS. Role of di-allyl disulfide, a garlic component in NF-κB mediated transient G2-M phase arrest and apoptosis in human leukemic cell-lines. *Nutr Cancer.* 2013;65(4):611-22. PMID: 23659453.

Trinh K, Moore K, Wes PD, et al. Induction of the phase II detoxification pathway suppresses neuron loss in Drosophila models of Parkinson's disease. *J Neurosci.* 2008 Jan 9;28(2):465-72. PMID: 18184789.

Chung LY. The antioxidant properties of garlic compounds: allyl cysteine, alliin, allicin, and allyl disulfide. *J Med Food.* 2006 Summer;9(2):205-13. PMID: 16822206.

Singh DK, Porter TD. Inhibition of sterol 4α-methyl oxidase is the principal mechanism by which garlic decreases cholesterol synthesis. *J Nutr.* 2006 Mar;136(3 Suppl):759S-764S. PMID: 16484558.

Shoji S, Furuishi K, Yanase R, et al. Allyl compounds selectively killed human immunodeficiency virus (type 1)-infected cells. *Biochem Biophys Res Commun.* 1993 Jul 30;194(2):610-21. PMID: 8343148.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.