



# LKT Laboratories, Inc.

## Allicin, aqueous solution

Phone: 888-558-5227  
651-644-8424  
Fax: 888-558-7329  
Email: [getinfo@lktlabs.com](mailto:getinfo@lktlabs.com)  
Web: [lktlabs.com](http://lktlabs.com)

### Product Information

Product ID A4441

CAS No. 539-86-6

Chemical Name Thio-2-propene-1-sulfinic acid S-allyl ester

Synonym Allylthiosulphinic acid allyl ester, Diallyl thiosulfinate

Formula  $C_6H_{10}OS_2$

Formula Wt. 162.27

Melting Point

Purity  $\geq 98\%$

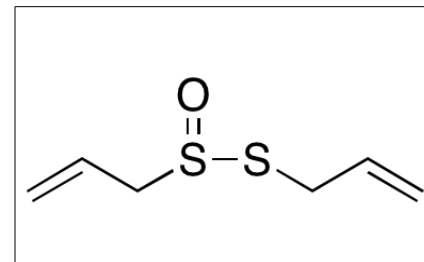
Solubility Soluble in water. Miscible with alcohol. **This product is a solution of water:formic acid (99.9:0.1) and allicin at 10 mg/mL.**

Store Temp  $-80^\circ C$

Ship Temp Dry Ice

**Description** Allicin is a thiocyanate found in garlic; it exhibits a wide variety of properties, including anticancer, antioxidative, cardioprotective, antihypertensive, anti-arrhythmic, anti-parasitic, and anti-diabetic activities. In vitro, allicin binds cellular nucleic acids, primarily nitrogenous bases and phosphate backbones, and induces autophagy and apoptosis, leading to cell death. The cardiovascular activities of allicin stem from its ability to decrease systolic blood pressure and triglyceride levels and to shorten action potential duration through inhibition of L-type  $Ca^{2+}$  channels and activation of inwardly rectifying  $K^+$  channels in animal models. The antioxidative activity of allicin is shown in vitro and in vivo through its ability to enhance Nrf2 signaling, to increase superoxide dismutase and glutathione levels, and also to inhibit cyclophosphamide-induced oxidative lung damage in animal models. Additionally, allicin inhibits multiplication of intracellular *Leishmania* promastigotes in vitro and ex vivo and decreases anti-islet cell antibodies and insulin levels in animal models of type 1 diabetes mellitus.

**This product is an aqueous solution (with 0.1 % formic acid as a stabilizer) of allicin at 10 mg/mL.**



**Bulk quantities available upon request**

Product ID	Size
A4441	1 mg
A4441	5 mg

**References** Chu YL, Ho CT, Chung JG, et al. Allicin Induces Anti-human Liver Cancer Cells through the p53 Gene Modulating Apoptosis and Autophagy. *J Agric Food Chem.* 2013 Oct 16;61(41):9839-9848. PMID: 24059278.

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Elkayam A, Peleg E, Grossman E, et al. Effects of allicin on cardiovascular risk factors in spontaneously hypertensive rats. *Isr Med Assoc J.* 2013 Mar;15(3):170-3. PMID: 23662381.

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Osman M, Adnan A, Salmah Bakar N, et al. Allicin has significant effect on autoimmune anti-islet cell antibodies in type 1 diabetic rats. *Pol J Pathol.* 2012 Dec;63(4):248-54. PMID: 23359194.

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