

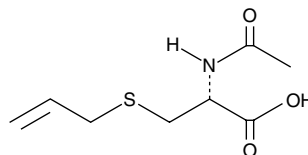
# Product Information



## N-Acetyl-S-allyl-L-cysteine

Item No. 17592

**CAS Registry No.:** 23127-41-5  
**Formal Name:** N-acetyl-S-2-propen-1-yl-L-cysteine  
**MF:** C<sub>8</sub>H<sub>13</sub>NO<sub>3</sub>S  
**FW:** 203.3  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that N-acetyl-S-allyl-L-cysteine be stored as supplied at -20°C. It should be stable for at least two years.

N-Acetyl-S-allyl-L-cysteine is supplied as a crystalline solid. A stock solution may be made by dissolving the N-acetyl-S-allyl-L-cysteine in the solvent of choice. N-Acetyl-S-allyl-L-cysteine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of N-acetyl-S-allyl-L-cysteine in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of N-acetyl-S-allyl-L-cysteine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of N-acetyl-S-allyl-L-cysteine in PBS, pH 7.2, is approximately 30 mg/ml. We do not recommend storing the aqueous solution for more than one day.

L-Deoxyalliin (Item No. 14014), also known as S-allyl-L-cysteine, is a water soluble organosulfur compound derived from garlic that has neuroprotective and antioxidative activities.<sup>1,2</sup> N-Acetyl-S-allyl-L-cysteine is a principal metabolite of L-deoxyalliin in humans, mice, rats, and dogs.<sup>3-5</sup> It is readily detected in plasma and urine. The conversion of L-deoxyalliin to N-acetyl-S-allyl-L-cysteine appears to be mediated by a family of flavin-containing monooxygenases.<sup>4,6</sup>

### References

1. Kim, J.-M., Chang, H.J., Kim, W.-K., *et al.* Structure-activity relationship of neuroprotective and reactive oxygen species scavenging activities for allium organosulfur compounds. *J. Agric. Food Chem.* **54**, 6547-6553 (2006).
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3. de Rooij, B.M., Boogaard, P.J., Rijkse, D.A., *et al.* Urinary excretion of N-acetyl-S-allyl-L-cysteine upon garlic consumption by human volunteers. *Arch. Toxicol.* **70**(10), 635-639 (1996).
4. Krause, R.J., Glocke, S.C., and Elfarra, A.A. Sulfoxides as urinary metabolites of S-allyl-L-cysteine in rats: Evidence for the involvement of flavin-containing monooxygenases. *Drug Metab. Dispos.* **30**(10), 1137-1142 (2002).
5. Amano, H., Kazamori, D., Itoh, K., *et al.* Metabolism, excretion, and pharmacokinetics of S-allyl-L-cysteine in rats and dogs. *Drug Metab. Dispos.* **43**(5), 749-755 (2015).
6. Krause, R.J., Lash, L.H., and Elfarra, A.A. Human kidney flavin-containing monooxygenases and their potential roles in cysteine S-conjugate metabolism and nephrotoxicity. *J. Pharmacol. Exp. Ther.* **304**(1), 185-191 (2003).

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