

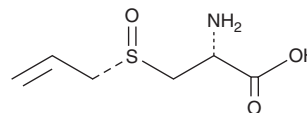
PRODUCT INFORMATION



(+)-Alliin

Item No. 14002

CAS Registry No.: 556-27-4
Formal Name: [S(S)]-S-2-propen-1-yl-L-cysteine, S-oxide
Synonym: S-Allyl-L-cysteine sulfoxide
MF: C₆H₁₁NO₃S
FW: 177.2
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(+)-Alliin is supplied as a crystalline solid. Aqueous solutions of (+)-alliin can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (+)-alliin in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Alliin is a cysteine sulfoxide constituent of garlic that is converted by alliinase to allicin, which imparts its pungent aroma and flavor.^{1,2} Alliin exhibits anti-cancer, anti-microbial, anti-hypertensive, cardioprotective, and anti-oxidant activities.³⁻⁵ S-allyl-cysteine is oxidized stereospecifically to (+)-alliin by garlic tissue cultures.²

References

1. Jones, M.G., Collin, H.A., Tregova, A., *et al.* The biochemical and physiological genesis of alliin in garlic. *Intl. J. Biomed. Pharma. Sci.* **1(1)**, 21-24 (2007).
2. Ohsumi, C., Hayashi, T., and Sano, K. Formation of alliin in the culture tissues of *Allium sativum*. Oxidation of S-allyl-L-cysteine. *Phytochem.* **33(1)**, 107-111 (1993).
3. Asdaq, S.M. and Inamdar, M.N. Potential of garlic and its active constituent, S-allyl cysteine, as antihypertensive and cardioprotective in presence of captopril. *Phytomedicine* **17(13)**, 1016-1026 (2010).
4. 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).
5. Louis, X.L., Murphy, R., Thandapilly, S.J., *et al.* Garlic extracts prevent oxidative stress, hypertrophy and apoptosis in cardiomyocytes: A role for nitric oxide and hydrogen sulfide. *BMC Complement. Altern. Med.* **12**, 140 (2012).

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, 11/15/2022

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