

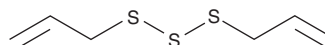
PRODUCT INFORMATION



Diallyl Trisulfide

Item No. 10012577

CAS Registry No.: 2050-87-5
Formal Name: di-2-propen-1-yl trisulfide
Synonyms: DATS, NSC 651936
MF: $C_6H_{10}S_3$
FW: 178.3
Purity: $\geq 95\%$
Supplied as: A solution in acetone
Storage: $-20^\circ C$
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly



Laboratory Procedures

Diallyl trisulfide is supplied as a solution in acetone. To change the solvent, simply evaporate the acetone under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, and dimethyl formamide (DMF) purged with an inert gas can be used. The solubility of diallyl trisulfide in these solvents is approximately 3, 5, and 10 mg/ml, respectively.

Diallyl trisulfide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, simply evaporate the acetone under a gentle stream of nitrogen and immediately add DMF. Diallyl trisulfide has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Hydrogen sulfide (H_2S) is an endogenously-produced gaseous second messenger that can regulate many physiological processes. Diallyl trisulfide (DATS) is an organic polysulfide compound found in garlic that acts as an H_2S donor.¹ It reduces the survival of prostate cancer PC-3 cells ($IC_{50} = 22 \mu M$)² and inhibits the growth of human colon adenocarcinoma HCT15 cells ($IC_{50} = 11.5 \mu M$).³ DATS suppresses the growth of PC-3 xenografts *in vivo* in mice⁴ and induces vascular smooth muscle relaxation.¹ Garlic extracts also lower cholesterol and there is evidence that DATS can alter the expression of genes and inhibit enzymes that are relevant to cholesterol synthesis.^{5,6}

References

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4. Xiao, D., Lew, K.L., Kim, Y.-A., *et al. Clin. Cancer Res.* **12(22)**, 6836-6843 (2006).
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6. Gupta, N. and Porter, T.D. *J. Nutr.* **131**, 1662-1667 (2001).

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.

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