

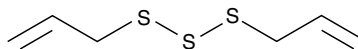
Product Information



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: $\geq 95\%$
Stability: ≥ 1 year at -20°C
Supplied as: A solution in acetone



Laboratory Procedures

For long term storage, we suggest that diallyl trisulfide be stored as supplied at -20°C . It should be stable for at least one year.

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.

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 ($\text{IC}_{50} = 22 \mu\text{M}$)² and inhibits the growth of human colon adenocarcinoma HCT-15 cells ($\text{IC}_{50} = 11.5 \mu\text{M}$).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

1. Benavides, G.A., Squadrito, G.L., Mills, R.W., *et al. Proc. Natl. Acad. Sci. USA* **104**(46), 17977-17982 (2007).
2. Xiao, D., Choi, S., Johnson, D.E., *et al. Oncogene* **23**, 5594-5606 (2004).
3. Hosono, T., Fukao, T., Ogihara, J., *et al. J. Biol. Chem.* **280**(50), 41487-41493 (2005).
4. Xiao, D., Lew, K.L., Kim, Y.-A., *et al. Clin. Cancer Res.* **12**(22), 6836-6843 (2006).
5. Zhou, Z., Tan, H.-L., Xu, B.-X., *et al. Pharmacological Reports* **57**, 818-823 (2005).
6. Gupta, N. and Porter, T.D. *J. Nutr.* **131**, 1662-1667 (2001).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10012577

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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