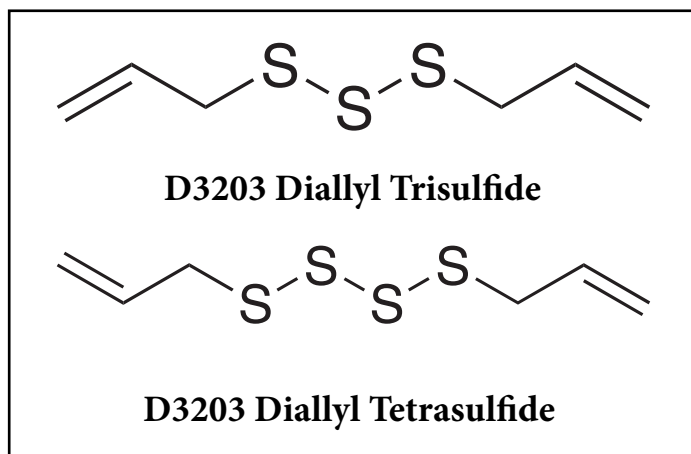


Diallyl Trisulfide

Diallyl Trisulfide (DATS, D3202) and **Diallyl Tetrasulfide (DTS, D3203)** are organosulfur compounds derived from garlic and other *Allium* plants. These compounds are decomposition products of **Alliin (A4440)** that are released when garlic is crushed.

Organosulfur compounds exhibit a variety of biological activities. DATS and DTS play a significant role in garlic's antibacterial activity, inhibiting growth of *Staphylococcus aureus*, *Pseudomonas aeruginosa*, and *Escherichia coli*¹. In animal models of diabetes, DATS improves cardiac function. This compound increases PI3K-Akt signaling, preventing death receptor- and mitochondria-dependent apoptosis and ameliorating diabetic cardiomyopathy².

DATS and DTS also exhibit anticancer activity. Some studies suggest that the antioxidative nature of these compounds is involved in their chemotherapeutic potential³. In leukemia cells, DATS increases ROS generation and activates caspases to induce apoptosis and inhibit cell proliferation⁴. In other models, administration of DTS is linked to microtubule depolymerization and G2/M phase cell cycle arrest⁵.



This compound activates JNK signaling, inducing phosphorylation of Bcl-2 and apoptosis in the same study. Additionally, DTS irreversibly inhibits Cdc25, inducing cell cycle arrest and inhibiting proliferation of breast cancer cells⁶. These compounds can also be chemopreventive, suppressing the development of tumors. In animal models of skin tumor carcinogenesis, DATS prevents TPA-induced formation and multiplicity of papillomas⁷.

In addition to DATS and DTS, LKT Laboratories also carries **Diallyl Sulfide (D3201)**, **Allyl Disulfide (A4544)**, **L-Deoxyalliin (D1757)**, **L-Alliin (A4444)**, and **L-(+)-Alliin (A4443)**.

References:

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