

# PRODUCT INFORMATION



## Farnesyl Thiosalicylic Acid

Item No. 10010501

**CAS Registry No.:** 162520-00-5  
**Formal Name:** 2-[[[(2E,6E)-3,7,11-trimethyl-2,6,10-dodecatrien-1-yl]thio]-benzoic acid

**Synonyms:** FTS, Salirasib

**MF:** C<sub>22</sub>H<sub>30</sub>O<sub>2</sub>S

**FW:** 358.5

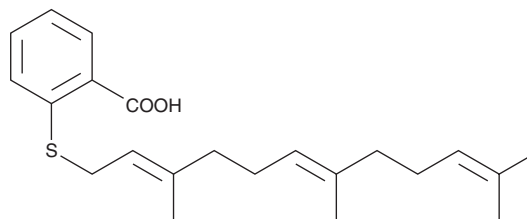
**Purity:** ≥96%

**UV/Vis.:** λ<sub>max</sub>: 263, 321 nm

**Supplied as:** A crystalline solid

**Storage:** -20°C

**Stability:** As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly



### Laboratory Procedures

Farnesyl thiosalicylic acid (FTS) is supplied as a crystalline solid. A stock solution may be made by dissolving the FTS in the solvent of choice. FTS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of FTS in ethanol and DMF is approximately 30 mg/ml and approximately 20 mg/ml in DMSO.

FTS is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, FTS should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. FTS has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Association of Ras protein with the inner surface of the plasma membrane is required for Ras signaling activity. FTS is an inhibitor of Ras-mediated signaling that functions by dislodging Ras from the cell membrane thereby rendering it susceptible to proteolytic degradation.<sup>1</sup> FTS inhibits the growth of human Ha-ras-transformed Rat1 fibroblasts with an IC<sub>50</sub> value of 7.5 μM.<sup>2</sup> It does not inhibit Ras farnesylation *in vitro* and although FTS does inhibit prenylated protein methyltransferase (PPMTase) in cell-free systems with a K<sub>i</sub> value of 2.6 μM, it is relatively ineffective at inhibiting methylation in whole cells.<sup>3</sup> Treatment of chow-fed ApoE-deficient mice with 5 mg/kg FTS three times per week for six weeks reduces early atherosclerotic lesion development by 52% compared to controls.<sup>4</sup>

### References

1. Haklai, R., Weisz, M.G., Elad, G., *et al.* Dislodgment and accelerated degradation of ras. *Biochem.* **37**, 1306-1314 (1998).
2. Marciano, D., Ben-Baruch, G., Marom, M., *et al.* Farnesyl derivatives of rigid carboxylic acids-inhibitors of ras-dependent cell growth. *J. Med. Chem.* **38**, 1267-1272 (1995).
3. Marom, M., Haklai, R., Ben-Baruch, G., *et al.* Selective inhibition of ras-dependent cell growth by farnesylthiosalicylic acid. *J. Biol. Chem.* **270(38)**, 22263-22270 (1995).
4. George, J., Afek, A., Keren, P., *et al.* Functional inhibition of ras by *S-trans, trans*-farnesyl thiosalicylic acid attenuates atherosclerosis in apolipoprotein E knockout mice. *Circulation* **105**, 2416-2422 (2002).

#### 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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#### 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