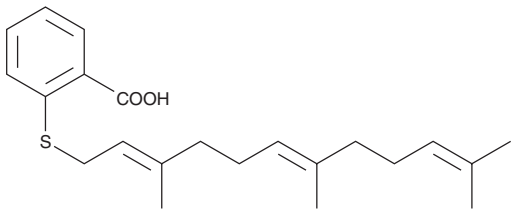
PRODUCT INFORMATION

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:	$C_{22}H_{30}O_2S$
FW:	358.5
Purity:	≥96%
UV/Vis.:	λ_{max}: 263, 321 nm
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

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, which should be purged with an inert gas. FTS is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). 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.[1] FTS inhibits the growth of human Ha-ras-transformed Rat1 fibroblasts with an IC_{50} value of 7.5 µM.[2] It does not inhibit Ras farnesylation *in vitro* and although FTS does inhibit prenylated protein methyltransferase (PPMTase) in cell-free systems with a K_i value of 2.6 µM, it is relatively ineffective at inhibiting methylation in whole cells.[3] 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.[4]

References

1. Haklai, R., Weisz, M.G., Elad, G., *et al.* Dislodgment and accelerated degradation of ras. *Biochem.* **37(5)**, 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(8)**, 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(20)**, 2416-2422 (2002).

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