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- Trockeneiszuschlag
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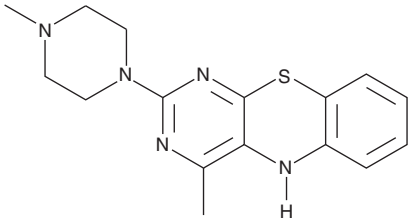
PRODUCT INFORMATION

15-Lipoxygenase Inhibitor 1

Item No. 10010468

CAS Registry No.:	928853-86-5
Formal Name:	4-methyl-2-(4-methylpiperazinyl) pyrimido[4,5-b]benzothiazine
Synonym:	15-LO Inhibitor 1
MF:	$C_{16}H_{19}N_5S$
FW:	313.4
Purity:	≥95%
Stability:	≥1 year at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 323, 255, 221 nm



Laboratory Procedures

For long term storage, we suggest that 15-lipoxygenase inhibitor 1 (15-LO inhibitor 1) be stored as supplied at -20°C. It should be stable for at least one year.

15-LO inhibitor 1 is supplied as a crystalline solid. A stock solution may be made by dissolving the 15-LO inhibitor 1 in the solvent of choice. 15-LO inhibitor 1 is soluble in chloroform at a concentration of approximately 5 mg/ml.

15-LO inhibitor 1 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Lipoxygenases (LOs) are non-heme iron-containing dioxygenases that catalyze the oxidation of polyunsaturated fatty acids to generate unsaturated fatty acid hydroperoxides.[1] The immediate products of 15-LO fatty acid oxidation act as mediators in inflammation, thrombosis, and cancer.[2] 15-LO inhibitor 1 is a heterocyclic pyrimidobenzothiazine compound that inhibits 15-LO with an IC_{50} value of 18 µM.[3] The inhibitor appears to act as an antioxidant, interfering with the redox cycle of 15-LO.[3]

References

1. Gaffney, B.J. Lipoxygenases: Structural principles and spectroscopy. *Annu. Rev. Biophys. Biomol. Struct.* **25**, 431-459 (1996).
2. Chanez, P., Bonnans, C., Chavis, C., *et al.* 15-Lipoxygenase. A janus enzyme? *Am. J. Respir. Cell Mol. Biol.* **27**, 655-658 (2002).
3. Bakavoli, M., Nikpour, M., Rahimizadeh, M., *et al.* Design and synthesis of pyrimido[4,5-b][1,4]benzothiazine derivatives, as potent 15-lipoxygenase inhibitors. *Bioorg. Med. Chem.* **15**, 2120-2126 (2007).

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