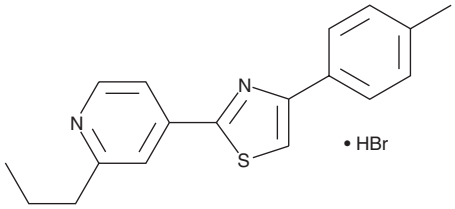
PRODUCT INFORMATION

Fatostatin (hydrobromide)

Item No. 13562

CAS Registry No.:	298197-04-3
Formal Name:	4-[4-(4-methylphenyl)-2-thiazolyl]-2-propyl-pyridine, hydrobromide
Synonym:	125B11
MF:	$C_{18}H_{18}N_2S$ • HBr
FW:	375.3
Purity:	≥95%
UV/Vis.:	λ_{max}: 257, 336 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

Fatostatin (hydrobromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the fatostatin (hydrobromide) in the solvent of choice, which should be purged with an inert gas. Fatostatin (hydrobromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of fatostatin (hydrobromide) in these solvents is approximately 0.1, 1.2, and 1 mg/ml, respectively.

Fatostatin (hydrobromide) 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

Sterol regulatory element binding proteins (SREBPs) are transcription factors that have pivotal roles in lipogenesis and fat metabolism.[1] The activation of SREBPs requires escort to the Golgi by SREBP cleavage-activating protein (SCAP) followed by proteolytic release of SREBP from the Golgi.[2] Fatostatin is an inhibitor of SREBP activation, preventing SCAP-mediated escort of either SREBP-1 or SREBP-2 to the Golgi (IC_{50} = 5.6 µM).[3,4] This blocks constitutive SREBP-mediated gene expression in the human prostate cancer cell line DU145.[3] Fatostatin prevents insulin-induced adipogenesis of 3T3-L1 cells as well as growth induced by insulin-like growth factor 1 in DU145 cells (IC_{50} = 0.1 µM).[5] Through its actions on SCAP/SREBP-1, it inhibits high glucose-induced upregulation of TGF-β in primary rat mesangial cells.[6] This compound also alters lipid metabolism *in vivo*, reducing hepatic fat accumulation in *ob/ob* mice.[3]

References

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3. Kamisuki, S., Mao, Q., Abu-Elheiga, L., *et al. Chem. Biol.* **16(8)**, 882-892 (2009).
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5. Choi, Y., Kawazoe, Y., Murakami, K., *et al. J. Biol. Chem.* **278(9)**, 7320-7324 (2003).
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