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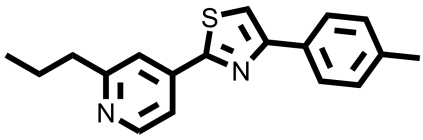
Fatostatin A --- Sterol Regulatory Binding Proteins (SREBPs) Inhibitor

Chemical Name: 2-(2-propylpyridin-4-yl)-4-(p-tolyl)thiazole



Molecular Weight:	294.41
Formula:	$C_{18}H_{18}N_2S$
Purity:	≥98%
CAS#:	125256-00-0
Solubility:	DMSO up to 50 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

Fatostatin A is a highly potent, specific and cell permeable inhibitor of Sterol Regulatory Binding Proteins (SREBPs). It inhibits the ER-Golgi translocation of SREBPs via binding to their escort protein (SCAP). It blocks adipogenesis by inhibiting the activation of SREBP-1 and SREBP-2. It exhibits anti-proliferative effects on DU 145 cells independently of IGF-1 signaling (IC_{50} ~0.1 μM). Fatostatin A can prevent increases in body weight, blood glucose and hepatic fat accumulation and reverses hyperglycemia in diabetic (ob/ob) mice, even under uncontrolled food intake. Fatostatin A may serve as a tool for gaining further insights into the regulation of SREBP.

How to Use:

In vitro: Fatostatin A was used at 10-20 μM in vitro.

In vivo: Fatostatin A was delivered intraperitoneally at 30 mg/kg once daily for 28 days in ob/ob mice model.

Reference:

1. Choi Y, et al. Identification of bioactive molecules by adipogenesis profiling of organic compounds. (2003) J Biol Chem. 278(9):7320-4.
2. Kamisuki S, et al. A small molecule that blocks fat synthesis by inhibiting the activation of SREBP. (2009) Chem Biol. 16(8):882-92.