Product Data Sheet

Product Name: N-Octadecyl-N'-propyl-sulfamide
Cat. No.: GC12400

Chemical Properties

Cas. No.	925891-74-3		
Chemical Name	N-octadecyl-N'-propyl-sulfamide		
SMILES	CCCCCCCCCCCCCCCCCCNS(=O)(=O)NCCC		
Formula	$C_{21}H_{46}N_2O_2S$	M.Wt	390.7
Solubility	≤0.2mg/ml in ethanol	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			

Background

N-Octadecyl-N'-propyl-sulfamide is a potent activator of PPARα with EC50 value of 100 nM [1].

Peroxisome proliferator-activated receptors (PPARs) are members of a superfamily of nuclear hormone receptors with three isoforms PPARα, PPARγ and PPARδ. These ligand-activated transcription factors play important roles in the regulation of lipid and glucose metabolism, and are interesting targets useful in diseases related to altered metabolism such as diabetes, dyslipidemia and obesity [1].

N-Octadecyl-N'-propyl-sulfamide, an analog of oleoylethanolamide (OEA), is a potent hypolipidemic compound and a potent feeding suppressant. N-Octadecyl-N'-propyl-sulfamide is a concentration-dependent activator of PPARα with EC50 value of 100 nM. In MCF-7 cells transfected with human PPARα, N-Octadecyl-N'-propyl-sulfamide exhibited potent and selective PPARα subtype transactivation activity [1][2].

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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In 24-h food-deprived Wistar rats, i.p. injection of N-Octadecyl-N'-propyl-sulfamide (1 mg/kg) reduced body weight and produced a marked reduction in plasma triglycerides, which were similar to the effects of OEA. In genetically obese Zucker (fa/fa) rats, i.p. injection of N-Octadecyl-N'-propyl-sulfamide (1 mg/kg) reduced body weight gain and food intake [1].

References:

[1]. Cano C, Pavón J, Serrano A, et al. Novel sulfamide analogs of oleoylethanolamide showing in vivo satiety inducing actions and PPARalpha activation. J Med Chem. 2007 Jan 25;50(2):389-93.
[2]. Fu J1, Gaetani S, Oveisi F, et al. Oleylethanolamide regulates feeding and body weight through activation of the nuclear receptor PPAR-alpha. Nature. 2003 Sep 4;425(6953):90-3.

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