

Product Name: Lalistat 1

Catalog No.: 6098

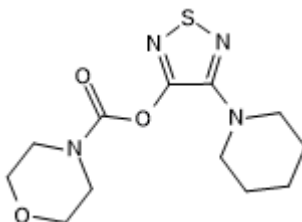
Batch No.: 1

CAS Number: 501104-16-1

IUPAC Name: 4-(Piperidin-1-yl)-1,2,5-thiadiazol-3-yl morpholine-4-carboxylate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₁₈N₄O₃S
Batch Molecular Weight: 298.36
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.7 (Ethyl acetate:Petroleum ether [1:1])
HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.31	6.08	18.78
Found	48.31	6.09	18.7

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Potent and selective lysosomal acid lipase (LAL) inhibitor (IC_{50} = 68 nM). Exhibits no significant activity against pancreatic lipase or lipoprotein lipase at 10 μ M concentration. Blocks LAL-mediated lipid hydrolysis of acetylated LDL and reduces efflux of cholesterol from lipid-loaded cells resulting in increased cellular cholesterol ester levels.

Physical and Chemical Properties:

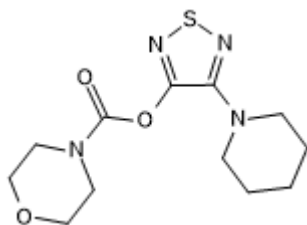
Batch Molecular Formula: $C_{12}H_{18}N_4O_3S$

Batch Molecular Weight: 298.36

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



References:

Ouimet *et al* (2011) Autophagy regulates cholesterol efflux from macrophage foam cells via lysosomal acid lipase. *Cell Metab.* **13** 655. PMID: 21641547.

Rosenbaum *et al* (2010) Thiadiazole carbamates: potent inhibitors of lysosomal acid lipase and potential Niemann-Pick type C disease therapeutics. *J.Med.Chem.* **53** 5281. PMID: 20557099.

Rosenbaum *et al* (2009) Chemical screen to reduce sterol accumulation in Niemann-Pick C disease cells identifies novel lysosomal acid lipase inhibitors. *Biochim.Biophys.Acta.* **1791** 1155. PMID: 19699313.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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