Print Date: Dec 5th 2018

Certificate of Analysis

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Product Name: **Lalistat 2** **Catalog No.: 6099** **Batch No.: 1**

CAS Number: 1234569-09-5

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{13}H_{20}N_4O_2S$

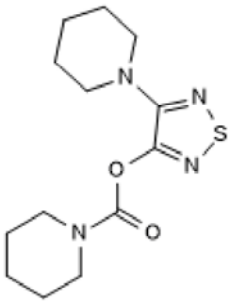
Batch Molecular Weight: 296.39

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 = 0.87 (Ethyl acetate:Petroleum ether [1:1])

HPLC: Shows 99.1% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.68	6.8	18.9
Found	52.84	6.91	18.86

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Product Information

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CAS Number: 1234569-09-5

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

Description:

Selective lysosomal acid lipase inhibitor (IC_{50} = 152 nM). Exhibits no inhibition of human pancreatic lipase or bovine milk lipoprotein lipase (up to 10 µM).

Physical and Chemical Properties:

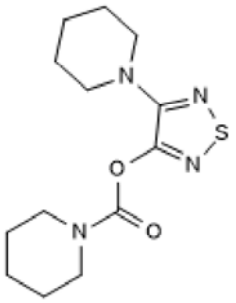
Batch Molecular Formula: $C_{13}H_{20}N_4O_2S$

Batch Molecular Weight: 296.39

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



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.

References:

Hamilton *et al* (2012) A new method for the measurement of lysosomal acid lipase in dried blood spots using the inhibitor Lalistat 2. Clin.Chim.Acta. ***413*** 1207. PMID: 22483793 .

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.