

Product Name: Acetazolamide

Catalog No.: 6742

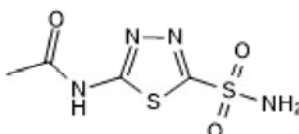
Batch No.: 1

CAS Number: 59-66-5

IUPAC Name: *N*-[5-(Aminosulfonyl)-1,3,4-thiadiazol-2-yl]acetamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₄H₆N₄O₃S₂
Batch Molecular Weight: 222.25
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 21.62 | 2.72 | 25.21 |
| Found | 21.8 | 2.71 | 25.09 |

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

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IUPAC Name: *N*-[5-(Aminosulfonyl)-1,3,4-thiadiazol-2-yl]acetamide

Description:

Carbonic anhydrase inhibitor. Modulates epileptiform synchronization in rat brain slices. Increases speed of synaptic vesicle recycling and changes synaptic performance in ex vivo murine neuromuscular junction. Lowers intracranial pressure in healthy rats. Also potentiates the antitumor effects of the HDAC inhibitor MS 275 (Cat. No. 6208).

Physical and Chemical Properties:

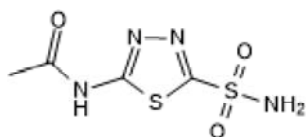
Batch Molecular Formula: C₄H₆N₄O₃S₂

Batch Molecular Weight: 222.25

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO 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:

Bayat et al (2017) Acetazolamide potentiates the anti-tumor potential of HDACi, MS-275, in neuroblastoma. *BMC Cancer*. **17** 156. PMID: 28235409.

Bertone et al (2017) Carbonic anhydrase inhibitor acetazolamide shifts synaptic vesicle recycling to a fast mode at the mouse neuromuscular junction. *Synapse*. **71**. PMID: 28873252.

Uldall et al (2017) Acetazolamide lowers intracranial pressure and modulates the cerebrospinal fluid secretion pathway in healthy rats. *Neurosci.Lett*. **645** 33. PMID: 28219789.

Hamidi (2015) Carbonic anhydrase inhibition by acetazolamide reduces *in vitro* epileptiform synchronization. *Neuropharmacology*. **95** 377. PMID: 25937211.

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