

Certificate of Analysis

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Product Name: S 107 hydrochloride

Catalog No.: 3893

Batch No.: 1

CAS Number: 927871-76-9

IUPAC Name: 2,3,4,5-Tetrahydro-7-methoxy-4-methyl-1,4-benzothiazepine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₁₅NOS.HCl.¼H₂O

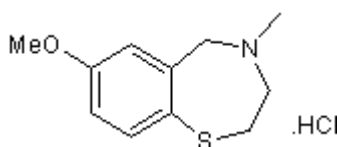
Batch Molecular Weight: 250.27

Physical Appearance: Off-white solid

Solubility: water to 100 mM
DMSO to 100 mM
ethanol to 25 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.3 (Chloroform:Methanol [95:5])

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	52.79	6.64	5.6
Found	53.08	6.46	5.84

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

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Description:

Type 1 ryanodine receptor (RyR1) stabilizer; binds RyR1 and enhances the binding affinity of calstabin-1. Inhibits Ca²⁺ leak from the sarcoplasmic reticulum (SR). Activity results in improved muscle function and increased exercise performance in a Duchenne muscular dystrophy (DMD) mouse model (mdx). Also reduces exercise-induced muscle damage by lowering calpain activation and plasma creatine kinase levels.

Physical and Chemical Properties:

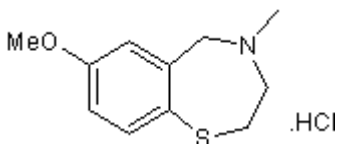
Batch Molecular Formula: C₁₁H₁₅NOS.HCl.¼H₂O

Batch Molecular Weight: 250.27

Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

water to 100 mM
DMSO to 100 mM
ethanol to 25 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:

Bellinger et al (2008) Remodeling of ryanodine receptor complex causes "leaky" channels: a molecular mechanism for decreased exercise capacity. *Proc.Natl.Acad.Sci.* **105** 2198.

Bellinger et al (2009) Hypernitrosylated ryanodine receptor/calcium release channels are leaky in dystrophic muscle. *Nature Med.* **15** 325.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956