

Certificate of Analysis

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Product Name: IDRA 21

Catalog No.: 1219

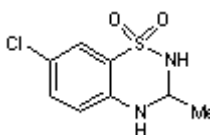
Batch No.: 2

CAS Number: 22503-72-6

IUPAC Name: 7-Chloro-3-methyl-3,4-dihydro-2H-1,2,4-benzothiadiazine S,S-dioxide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₈H₉ClN₂O₂S
Batch Molecular Weight: 232.68
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.27 (Ethyl acetate:Petroleum ether [1:2])
Melting Point: At 216°C
HPLC: Shows >98.2% purity
¹H NMR: Consistent with structure
Microanalysis:

	Carbon Hydrogen Nitrogen			
Theoretical	41.3	3.9	12.03	0 0 0
Found	41.25	3.89	11.75	0 0 0

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

Product Information

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Description:

Inhibits AMPA receptor desensitization and enhances cognition by a related mechanism. More able to cross the blood-brain barrier than cyclothiazide (Cat. No. 0713).

Physical and Chemical Properties:

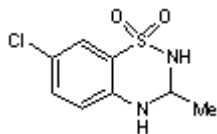
Batch Molecular Formula: C₈H₉ClN₂O₂S

Batch Molecular Weight: 232.68

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at RT

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:

Thompson *et al* (1995) 7-Chloro-3-methyl-3,4-dihydro-2H-1,2,4-benzothiadiazine S,S-dioxide (IDRA 21), a congener of aniracetam, potentially abates pharmacologically induced cognitive impairments in patas monkeys. *Proc.Natl.Acad.Sci.U.S.A.* **92** 7667. PMID: 7644474.

Zivkovic *et al* (1995) 7-Chloro-3-methyl-3,4-dihydro-2H-1,2,4-benzothiadiazine S,S-dioxide (IDRA 21): a benzothiadiazine derivative that enhances cognition by attenuating DL-α-amino-2,3-dihydro-5-methyl-3-oxo-4-isoxazolepropanoic acid (AMPA) receptor desensitization. *J.Pharmacol.Exp.Ther.* **272** 300. PMID: 7815345.

Impagnatiello *et al* (1997) 7-Chloro-3-methyl-3,4-dihydro-2H-1,2,4-benzothiadiazine S,S-dioxide: a partial modulator of AMPA receptor desensitization devoid of neurotoxicity. *Proc.Natl.Acad.Sci.U.S.A.* **94** 7053. PMID: 9192690.

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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