

Certificate of Analysis

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Product Name: Tizanidine hydrochloride

Catalog No.: 3609

Batch No.: 1

CAS Number: 64461-82-1

IUPAC Name: 5-(Chloro-*N*-(4,5-dihydro-1*H*-imidazol-2-yl)-2,1,3-benzothiadiazol-4-amine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₈ClN₅S.HCl.¼H₂O

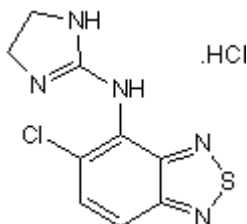
Batch Molecular Weight: 294.67

Physical Appearance: Pale yellow solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	36.68	3.25	23.77
Found	37.1	3.29	23.67

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

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Description:

α_2 -adrenergic receptor agonist. Antinociceptive upon epidural administration in rats (IC_{50} = 48 nM). Also binds to imidazoline receptor.

Physical and Chemical Properties:

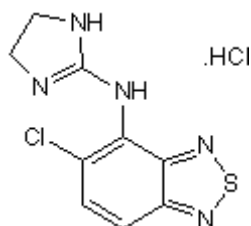
Batch Molecular Formula: $C_9H_8ClN_5S \cdot HCl \cdot \frac{1}{4}H_2O$

Batch Molecular Weight: 294.67

Physical Appearance: Pale yellow solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

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:

Asano et al (2000) Antinociception by epidural and systemic α_2 -adrenoceptor agonists and their binding affinity in rat spinal cord and brain. *Anesth.Analg.* **90** 400. PMID: 10648329.

Piletz et al (2000) Autoradiographic comparison of [³H]-Clonidine binding to non-adrenergic sites and α_2 -adrenergic receptors in human brain. *Neuropsychopharmacology* **23** 697. PMID: 11063925.

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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