

Certificate of Analysis

www.tocris.com

Product Name: Tamsulosin hydrochloride **Catalog No.:** 3050 **Batch No.:** 1
CAS Number: 106463-17-6
IUPAC Name: 5-[(2*R*)-2-[[2-(2-Ethoxyphenoxy)ethyl]amino]propyl]-2-methoxybenzenesulfonamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₈N₂O₅S.HCl.¼H₂O

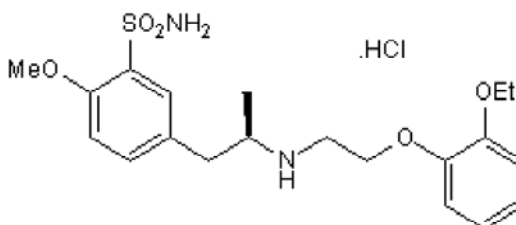
Batch Molecular Weight: 449.47

Physical Appearance: White solid

Solubility: water to 10 mM
DMSO to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 230 - 231°C

HPLC: Shows >99.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -12 (Concentration = 0.35, Solvent = Methanol)

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.44	6.62	6.23
Found	53.27	6.37	6.42

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

Product Name: Tamsulosin hydrochloride

Catalog No.: 3050

Batch No.: 1

CAS Number: 106463-17-6

IUPAC Name: 5-[(2R)-2-[[2-(2-Ethoxyphenoxy)ethyl]amino]propyl]-2-methoxybenzenesulfonamide hydrochloride

Description:

Tamsulosin hydrochloride is a selective α_{1A} -adrenoceptor antagonist (pK_i values are 9.97, 9.64 and 8.86 for α_{1A} , α_{1B} and α_{1D} subtypes respectively). Decreases resting maximal urethral pressure with negligible effect on mean arterial blood pressure in vivo.

Physical and Chemical Properties:

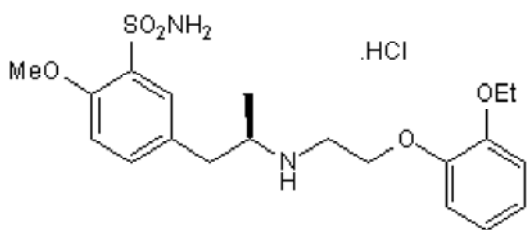
Batch Molecular Formula: $C_{20}H_{28}N_2O_5S \cdot HCl \cdot \frac{1}{2}H_2O$

Batch Molecular Weight: 449.47

Physical Appearance: White solid

Minimum Purity: $\geq 99\%$

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

water to 10 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:

Ohtake et al (2005) Effects of tamsu. on resting urethral pressure and arterial blood pressure in anaesthetized female dogs. *J.Pharm.Pharmacol.* **58** 345. PMID: 16536901.

Taguchi et al (1997) Effects of tamsu. metabolites at α -1 adrenoceptor subtypes. *J.Pharmacol.Exp.Ther.* **280** 1. PMID: 8996174.

Garcia-Sainz et al (1995) Alpha 1-adrenoceptor subtype selectivity of tamsulosin: studies using livers from different species. *Eur.J.Pharmacol.* **289** 1. PMID: 7781702.

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

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