Product Name: Tamsulosin hydrochloride

CAS Number: 106463-17-6

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( C_{20}H_{28}N_2O_5S \cdot HCl \cdot \frac{1}{4}H_2O \)

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:

![Molecular Structure](image)

2. ANALYTICAL DATA

Melting Point: Between 230 - 231°C

HPLC: Shows >99.4% purity

\(^1\text{H} \text{NMR:} \) Consistent with structure

Mass Spectrum: Consistent with structure

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

Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>53.44</td>
<td>53.27</td>
</tr>
<tr>
<td>Hydrogen</td>
<td>6.62</td>
<td>6.37</td>
</tr>
<tr>
<td>Nitrogen</td>
<td>6.23</td>
<td>6.42</td>
</tr>
</tbody>
</table>

Certificate of Analysis

Print Date: Mar 11th 2020

www.tocris.com

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

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**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:**  
Selective α₁A-adrenoceptor antagonist (pKᵢ values are 9.97, 9.64 and 8.86 for α₁A, α₁B and α₁D subtypes respectively). Decreases resting maximal urethral pressure with negligible effect on mean arterial blood pressure in vivo.

**Physical and Chemical Properties:**  
Batch Molecular Formula: C₂₀H₂₈N₂O₈S.HCl.½H₂O  
Batch Molecular Weight: 449.47  
Physical Appearance: White solid  
Minimum Purity: ≥99%

**Batch Molecular Structure:**

![Molecular Structure](image)

**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:**  
