Product Name: Diltiazem hydrochloride
CAS Number: 33286-22-5
Catalog No.: 0685
Batch No.: 5
IUPAC Name: (2S-cis)-3-(Acetyloxy)-5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-1,5-benzothiazepin-4(5H)-one hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{22}H_{26}N_{2}O_{4}S\cdot HCl$
Batch Molecular Weight: 450.98
Physical Appearance: White solid
Solubility: water to 100 mM, DMSO to 100 mM
Storage: Store at RT

2. ANALYTICAL DATA

HPLC: Shows 99.3% purity
$^1$H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: $[\alpha]_D = +96$ (Concentration = 1, Solvent = Methanol)
Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon</td>
<td>58.59</td>
<td>58.46</td>
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<tr>
<td>Hydrogen</td>
<td>6.03</td>
<td>5.88</td>
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<tr>
<td>Nitrogen</td>
<td>6.21</td>
<td>6.24</td>
</tr>
<tr>
<td>Chlorine</td>
<td>7.86</td>
<td>8.99</td>
</tr>
</tbody>
</table>

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

**Product Name:** Diltiazem hydrochloride  
**Catalog No.:** 0685  
**EC Number:** 251-443-3

**CAS Number:** 33286-22-5  
**IUPAC Name:** (2S-cis)-3-(Acetyloxy)-5-[2-(dimethylamino)ethyl]-2,3-dihydro-2-(4-methoxyphenyl)-1,5-benzothiazepin-4(5H)-one hydrochloride

**Description:**
Diltiazem hydrochloride is an antihypertensive and cardioprotective agent; an inhibitor of L-type Ca\(^{2+}\) channels.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** C\(_{22}\)H\(_{26}\)N\(_2\)O\(_4\)S.HCl
- **Batch Molecular Weight:** 450.98
- **Physical Appearance:** White solid
- **Minimum Purity:** ≥98%
- **Batch Molecular Structure:**

![Molecular Structure](image)

**Storage:** Store 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:**
- **Ishibashi et al** (1995) Block of P-type Ca\(^{2+}\) channels in freshly dissociated rat cerebellar Purkinje neurons by dilt. and vera. Brain Res. 695 88. PMID: 8574653.