Product Name: Medetomidine hydrochloride
Catalog No.: 5160
Batch No.: 1
CAS Number: 86347-15-1
IUPAC Name: 4-[1-(2,3-Dimethylphenyl)ethyl]-1H-imidazole hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{13}\text{H}_{16}\text{N}_2\cdot\text{HCl}\cdot\frac{1}{4}\text{H}_2\text{O} \)
Batch Molecular Weight: 241.24
Physical Appearance: White solid
Solubility: water to 100 mM
DMSO to 100 mM
Storage: Desiccate at RT

2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
\(^1\text{H} \text{NMR:} \) Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
<th></th>
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<tbody>
<tr>
<td>Carbon</td>
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<td>64.58</td>
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<tr>
<td>Hydrogen</td>
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<tr>
<td>Nitrogen</td>
<td>11.61</td>
<td>11.67</td>
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</tr>
</tbody>
</table>

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

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Description:
Medetomidine hydrochloride is a potent, highly selective \( \alpha_2 \)-adrenoceptor agonist (K values are 1.08 and 1750 nM for \( \alpha_2 \)- and \( \alpha_1 \)-adrenoceptors respectively). Displays greater selectivity over \( \alpha_1 \)-adrenoceptors than clonidine and UK 14,304 (1620-, 220- and 300-fold respectively). Inhibits twitch response in electrically stimulated mouse vas deferens \( \text{pD}_2 = 9.0 \). Active in vivo; displays hypotensive, bradycardic, sedative, anxiolytic, hypothermic and analgesic effects. Active isomer also available. Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:
Batch Molecular Formula: \( \text{C}_{13}\text{H}_{16}\text{N}_2\text{HCl.} \frac{1}{4}\text{H}_2\text{O} \)
Batch Molecular Weight: 241.24
Physical Appearance: White solid

Minimum Purity: \( \geq 99\% \)

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: