1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( \text{C}_{15}\text{H}_{22}\text{Cl}_{2}\text{N}_{2}\text{O}_{2} \)

Batch Molecular Weight: 333.25

Physical Appearance: Off-white solid

Solubility: Water to 50 mM

Storage: Desiccate at +4°C

Batch Molecular Structure:

![Molecular Structure Image]

2. ANALYTICAL DATA

TLC: \( R_f = 0.85 \) (2-Propanol:Water:Ammonia soln. [6:2:1])

HPLC: Shows 99.3% purity

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

Mass Spectrum: Consistent with structure

Microanalysis:

<table>
<thead>
<tr>
<th>Element</th>
<th>Theoretical</th>
<th>Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
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<tr>
<td>H</td>
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<tr>
<td>N</td>
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</table>
**Product Information**

**Product Name:** Sazetidine A dihydrochloride

**IUPAC Name:** 6-[(2S)-2-Azetidinylmethoxy]-3-pyridinyl]-5-hexyn-1-ol dihydrochloride

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**Description:**
Subtype-selective α4β2 nicotinic acetylcholine receptor ligand (Kᵢ values are 0.26 and 54 nM at α4β2 and α3β4 receptors respectively). May act as a silent desensitizer or as an agonist, depending on subunit stoichiometry (EC₅₀ = 1.1 nM for nAChR-stimulated dopamine release). Exhibits analgesic activity in vivo and significantly reduces nicotine self-administration in an experimental rat model.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** C₁₈H₂₂Cl₂N₂O₂
- **Batch Molecular Weight:** 333.25
- **Physical Appearance:** Off-white solid
- **Minimum Purity:** >98%

**Storage:** Desiccate at +4°C

**Solubility & Usage Info:**
Water to 50 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

**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.

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**References:**


