bio-techne
TOCRIS

Print Date: Feb 25th 2025

Certificate of Analysis

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Product Name: **Sazetidine A dihydrochloride** **Catalog No.: 2736** **Batch No.: 3**

CAS Number: 2455450-63-0

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{20}N_2O_2.2HCl$.

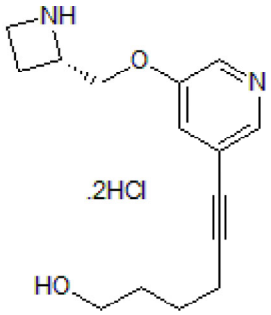
Batch Molecular Weight: 333.25

Physical Appearance: White solid

Solubility: water to 50 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.8% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	54.06	6.65	8.41	15.96
Found	53.41	6.59	8.25	19.65

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Description:

Sazetidine A dihydrochloride is a subtype-selective α4β2 nicotinic acetylcholine receptor ligand (K_i 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 (EC_{50} = 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:

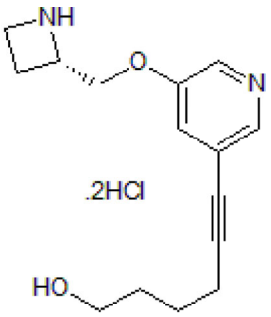
Batch Molecular Formula: $C_{15}H_{20}N_2O_2.2HCl$.

Batch Molecular Weight: 333.25

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 50 mM

This compound is hygroscopic and may absorb atmospheric moisture during prolonged storage, causing the solid to become sticky and/or collapse into a gel or glass-like form. Although purity is unaffected, it may be difficult to extract the full quantity from the vial. In such a situation, we recommend that solutions are made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Levin *et al* (2010) Sazetidine-A, a selective α4β2 nicotinic receptor desensitizing agent and partial agonist, reduces nicotine self-administration in rats. J.Pharmacol.Exp.Ther. ***332*** 933. PMID: 20007754.

Cucchiaro *et al* (2008) Analgesic effects of Sazetidine-A, a new nicotinic cholinergic drug. Anesthesiology ***109*** 512. PMID: 18719450.

Zwart *et al* (2008) Sazetidine-A is a potent and selective agonist at native recombinant α4β2 nicotinic acetylcholine receptors. Mol.Pharmacol. ***73*** 1843.