

Product Name: AP 14145 hydrochloride

Catalog No.: 6481

Batch No.: 1

CAS Number: 2387505-59-9

IUPAC Name: *N*-[2-[[[(1*R*)-1-[3-(Trifluoromethyl)phenyl]ethyl]amino]-1*H*-benzimidazol-7-yl]acetamide hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₁₇F₃N₄O.HCl.¾H₂O

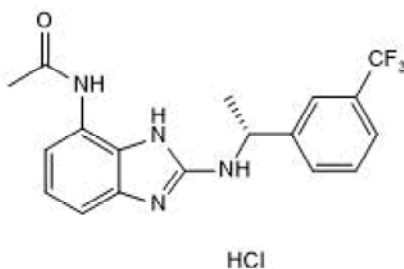
Batch Molecular Weight: 412.32

Physical Appearance: Off White solid

Solubility: DMSO to 100 mM
ethanol to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

Chiral HPLC: Shows 99.8% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	52.43	4.77	13.59
Found	52.38	4.7	13.49

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Description:

AP 14145 hydrochloride is a K_{Ca2} (small conductance Ca^{2+} -activated potassium) channel negative allosteric modulator (IC_{50} = 1.1 μ M). Increases the EC_{50} of Ca^{2+} on $K_{Ca2.3}$ channels by ~3-fold. Prolongs atrial effective refractory period (AERP) in rats. Reduces atrial fibrillation (AF) duration and prolongs atrial refractoriness without affecting ventricular refractory period in an animal AF model.

Physical and Chemical Properties:

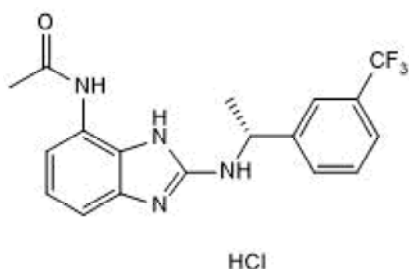
Batch Molecular Formula: $C_{18}H_{17}F_3N_4O \cdot HCl \cdot \frac{3}{4}H_2O$

Batch Molecular Weight: 412.32

Physical Appearance: Off White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at $-20^{\circ}C$

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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 $45-60^{\circ}C$ 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 $-20^{\circ}C$ or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Diness *et al* (2017) Termination of vernakalant-resistant atrial fibrillation by inhibition of small-conductance Ca^{2+} -activated K^{+} channels in pigs. *Circ.Arrhythm.Electrophysiol.* **10** e005125. PMID: 29018164.

Simó-Vicens *et al* (2017) A new negative allosteric modulator, AP14145, for the study of small conductance calcium-activated potassium (K_{Ca2}) channels. *Br.J.Pharmacol.* **174** 4396. PMID: 28925012.

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