bio-techne
TOCRIS

Print Date: Oct 21st 2024

Certificate of Analysis

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Product Name: **Ivabradine hydrochloride** **Catalog No.: 6542** **Batch No.: 1**

CAS Number: 148849-67-6

IUPAC Name: 3-[3-[[[(7*S*)-3,4-Dimethoxybicyclo[4.2.0]octa-1,3,5-trien-7-yl]methyl]methylamino]propyl]-1,3,4,5-tetrahydro-7,8-dimethoxy-2*H*-3-benzazepin-2-one hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{36}N_2O_5.HCl.¾H_2O$

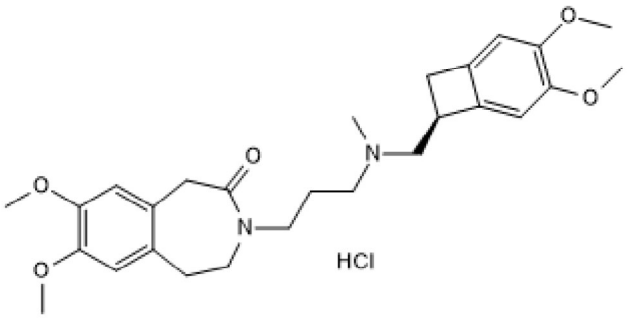
Batch Molecular Weight: 518.56

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.54	7.48	5.4
Found	62.69	7.56	5.39

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Description:

Ivabradine hydrochloride is a HCN channel blocker (IC_{50} is approximately 0.5 - 2.5 µM). Bradycardic agent that inhibits I_f pacemaker current in sinoatrial node cells.

Physical and Chemical Properties:

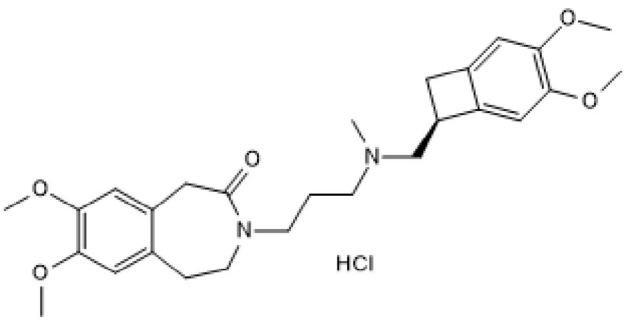
Batch Molecular Formula: $C_{27}H_{36}N_2O_5.HCl.¾H_2O$

Batch Molecular Weight: 518.56

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C

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. *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:

Novella Romanelli *et al* (2016) HCN channel modulators: the need for selectivity. Curr.Top.Med.Chem. ***16*** 1764. PMID: 26975509.

Thollon *et al* (1994) Electrophysiological effects of S 16257, a novel sino-atrial node modulator, on rabbit and guinea-pig cardiac preparations: comparison with UL-FS 49. Br.J.Pharmacol. ***112*** 37. PMID: 8032660.