

Certificate of Analysis

Product Name: Donitriptan hydrochloride

Catalog No.: 3665

Batch No.: 1

CAS Number: 170911-68-9

IUPAC Name: 1-[[[3-(2-Aminoethyl)-1*H*-indol-5-yl]oxy]acetyl]-4-(4-cyanophenyl)-piperazine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₅N₅O₂·HCl·H₂O

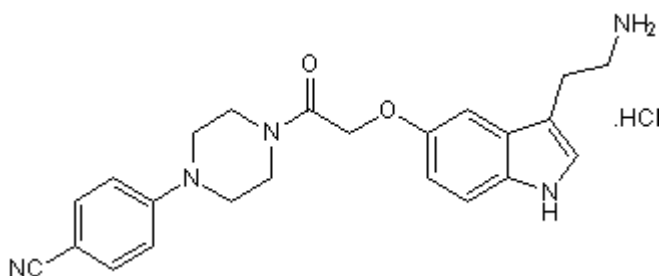
Batch Molecular Weight: 457.96

Physical Appearance: White solid

Solubility: DMSO to 50 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.23 (Chloroform:Methanol [9:1])

HPLC: Shows 99.2% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	60.32	6.16	15.29
Found	60.17	6.21	15.29

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Description:

Brain penetrant 5-HT_{1B/1D} agonist (pK_i values are 9.3 and 9.4 for 5-HT_{1D} and 5-HT_{1B} respectively). Inhibits capsaicin-induced external carotid vasodilation and produces selective carotid vasoconstriction in various animal species. Displays antimigraine activity.

Physical and Chemical Properties:

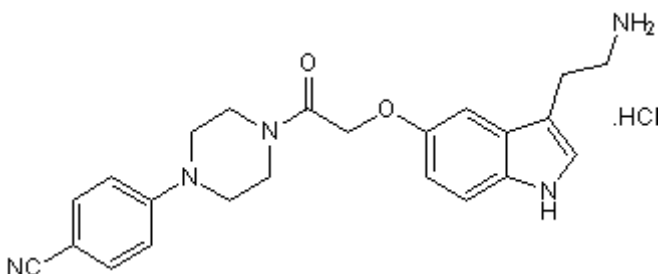
Batch Molecular Formula: C₂₃H₂₅N₅O₂.HCl.H₂O

Batch Molecular Weight: 457.96

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at RT

Solubility & Usage Info:

DMSO to 50 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:

Letienne et al (2003) Donitriptan selectively decreases jugular venous oxygen saturation in the anesthetized pig: further insights into its mechanism of action relevant to headache relief. *J.Pharmacol.Exp.Ther.* **305** 749. PMID: 12606602.

Letienne et al (2005) Donitriptan decreases jugular venous oxygen saturation in rats in the absence of cranial vasoconstriction: an overlooked mechanism of antimigraine action? *J.Pharmacol.Exp.Ther.* **315** 849. PMID: 16027226.

Munoz-Islas et al (2006) Donitriptan, but not sumatriptan, inhibits capsaicin-induced canine external carotid vasodilation via 5-HT_{1B} rather than 5-HT_{1D} receptors. *Br.J.Pharmacol.* **149** 82. PMID: 16880765.

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bio-techne.com

info@bio-techne.com

techsupport@bio-techne.com

North America

Tel: (800) 343 7475

China

info.cn@bio-techne.com

Tel: +86 (21) 52380373

Europe Middle East Africa

Tel: +44 (0)1235 529449

Rest of World

www.tocris.com/distributors

Tel:+1 612 379 2956