

Certificate of Analysis

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Product Name:	Minocycline hydrochloride	Catalog No.:	3268	Batch No.:	6
CAS Number:	13614-98-7	EC Number:	237-099-7		
IUPAC Name:	[4S-(4 α ,4a α ,5a α ,12a α)]-4,7-Bis(dimethylamino)-1,4,4a,5,5a,6,11,12a-octahydro-3,10,12,12a-tetrahydroxy-1,11-dioxo-2-naphthacenecarboxamide				

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₃H₂₇N₃O₇·HCl·2½H₂O

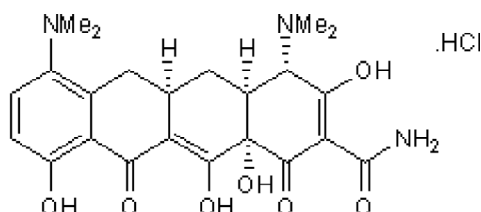
Batch Molecular Weight: 534.47

Physical Appearance: Pale brown solid

Solubility: DMSO to 100 mM
water to 25 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.3% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	51.69	6.13	7.86
Found	51.5	6.04	7.88

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Minocycline hydrochloride is a tetracycline antibiotic. Displays neuroprotective, antiapoptotic, anti-inflammatory and antimicrobial effects. Acts as a matrix metalloproteinase (MMP) inhibitor; attenuates disease severity in mouse models of multiple sclerosis. Orally active and brain penetrant. Allows formation of extended pluripotent stem (EPS) cells in combination with CHIR 99021 (Cat.No. 4423), (S)-(+)-Dimethindene maleate (Cat.No. 1425) and human leukemia inhibitory factor. For more information about how Minocycline hydrochloride may be used, see our protocol: Generation and Propagation of EPS cells (LCDM Cocktail). Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

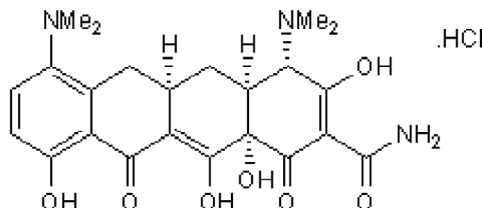
Batch Molecular Formula: C₂₃H₂₇N₃O₇·HCl·2½H₂O

Batch Molecular Weight: 534.47

Physical Appearance: Pale brown solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Yang *et al* (2017) Derivation of pluripotent stem cells with in vivo embryonic and extraembryonic potency. *Cell*. **169** 243. PMID: 28388409.

Padi and Kulkarni (2008) MinCyc prevents the development of neuropathic pain, but not acute pain: possible anti-inflammatory and antioxidant mechanisms. *Eur.J.Pharmacol.* **601** 79. PMID: 18952075.

Brundula *et al* (2002) Targeting leukocyte MMPs and transmigration: MinCyc as a potential therapy for multiple sclerosis. *Brain* **125** 1297. PMID: 12023318.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

water to 25 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.

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