

**Product Name:** Dexmedetomidine hydrochloride

**Catalog No.:** 2749

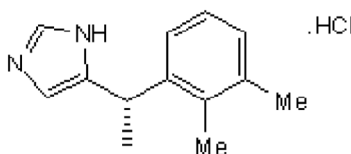
**Batch No.:** 3

CAS Number: 145108-58-3

IUPAC Name: 4-[(1S)-1-(2,3-Dimethylphenyl)ethyl]-1H-imidazole hydrochloride

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>.HCl  
**Batch Molecular Weight:** 236.74  
**Physical Appearance:** White solid  
**Solubility:** water to 100 mM  
DMSO to 100 mM  
**Storage:** Desiccate at RT  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.8% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	65.95	7.24	11.83
Found	65.14	7.26	11.76

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

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**Description:**

Dexmedetomidine hydrochloride is an active isomer of medetomidine, a potent, highly selective  $\alpha_2$ -adrenoceptor agonist ( $K_i$  values are 1.08 and 1750 nM for  $\alpha_2$ - and  $\alpha_1$ -adrenoceptors respectively). Displays greater selectivity over  $\alpha_1$ -adrenoceptors than Clonidine (Cat. No. 0690) and UK 14,304 (1620-, 220- and 300-fold respectively). Active in vivo; displays hypotensive, bradycardic, sedative, anxiolytic, hypothermic and analgesic effects. Racemate also available. Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

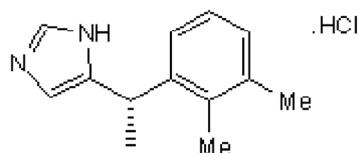
Batch Molecular Formula: C<sub>13</sub>H<sub>16</sub>N<sub>2</sub>.HCl

Batch Molecular Weight: 236.74

Physical Appearance: White solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**References:**

**Fisher et al** (1991) Antinociceptive properties of intrathecal dexmedetom. in rats. Eur.J.Pharmacol. **192** 221. PMID: 1674472.

**Scheinin et al** (1989) Medetomidine - a novel  $\alpha_2$ -adrenoceptor agonist: a review of its pharmacodynamic effects. Prog.Neuro-Psychopharm.Biol.Psychiat. **13** 635. PMID: 2571177.

**Virtanen et al** (1988) Characterization of the selectivity, specificity and potency of medetomidine as an  $\alpha_2$ -adrenoceptor agonist. Eur.J.Pharmacol. **150** 9. PMID: 2900154.

**Storage:** Desiccate at RT

**Solubility & Usage Info:**

water to 100 mM

DMSO to 100 mM

CAUTION - This product is hygroscopic and we recommend that it is desiccated upon arrival.

**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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