

Product Name: (S)-(+)-Dimethindene maleate

Catalog No.: 1425

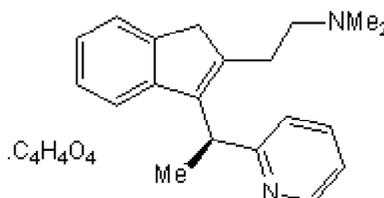
Batch No.: 4

CAS Number: 136152-65-3

IUPAC Name: *N,N*-Dimethyl-3-[(1*S*)-1-(2-pyridinyl)ethyl]-1*H*-indene-2-ethanamine maleate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₄N₂.C₄H₄O₄
Batch Molecular Weight: 408.5
Physical Appearance: White solid
Solubility: water to 100 mM with gentle warming
DMSO to 100 mM
Storage: Desiccate at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
Chiral HPLC: Shows 100% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Optical Rotation: [α]_D = +131 (Concentration = 1, Solvent = Water)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	70.57	6.91	6.86
Found	70.76	6.95	6.84

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

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Description:

(S)-(+)-Dimethindene maleate is an enantiomer that is a subtype-selective M₂ muscarinic receptor antagonist (pK_i values are 7.08, 7.78, 6.70 and 7.00 for M₁, M₂, M₃ and M₄ receptors respectively). Also H₁ histamine receptor antagonist (pK_i = 7.48). Allows formation of extended pluripotent stem (EPS) cells (see our protocol below) in combination with CHIR 99021 (Cat.No. 4423), minocycline hydrochloride (Cat.No. 3268) and human leukemia inhibitory factor. For more information about how Dimethindene maleate 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:

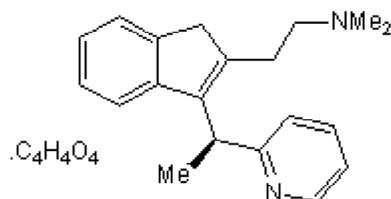
Batch Molecular Formula: C₂₀H₂₄N₂·C₄H₄O₄

Batch Molecular Weight: 408.5

Physical Appearance: White 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.

Lambrecht et al (1999) Neuronal soma-dendritic and prejunctional M₁-M₄ receptors in gastrointestinal and genitourinary smooth muscle. *Life Sci*. **64** 403. PMID: 10069503.

Pfaff et al (1995) The (S)-(+)-enantiomer of dimethindene: a novel M₂-selective muscarinic receptor antagonist. *Eur.J.Pharmacol*. **286** 229. PMID: 8608784.

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM with gentle warming
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.

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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