

Product Name: Fluoxetine hydrochloride

Catalog No.: 0927

Batch No.: 6

CAS Number: 56296-78-7

EC Number: 260-101-2

IUPAC Name: *N*-Methyl-3-[4-(trifluoromethyl)phenoxy]-3-phenylpropylamine hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₈F₃NO.HCl.

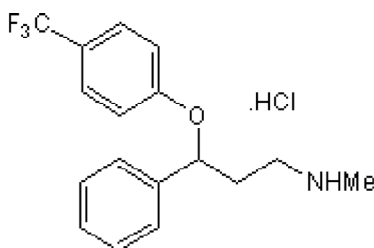
Batch Molecular Weight: 345.78

Physical Appearance: White solid

Solubility: DMSO to 100 mM
water to 10 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100.0% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	59.05	5.54	4.05
Found	59.16	5.52	3.99

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

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

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Description:

Fluoxetine hydrochloride is a selective serotonin reuptake inhibitor. Binds to the human 5-HT transporter with a K_i of 0.9 nmol/l and is between 150- and 900-fold selective over 5-HT_{1A}, 5-HT_{2A}, H₁, α_1 , α_2 -adrenergic, and muscarinic receptors. Antidepressant. Induces differentiation of neuronal precursors, enhancing neuronal characteristics. Fluoxetine also inhibits assembly and activation of the NLRP3-ASC inflammasome and prevents degeneration of retinal pigmented epithelium (RPE) cells in an animal model of dry age-related macular degeneration (AMD).

Physical and Chemical Properties:

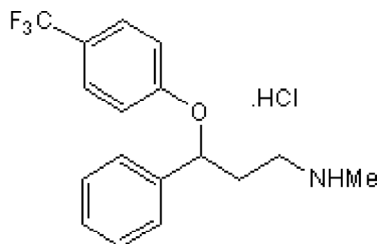
Batch Molecular Formula: C₁₇H₁₈F₃NO.HCl.

Batch Molecular Weight: 345.78

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Ambati et al (2021) Identification of fluoxetine as a direct NLRP3 inhibitor to treat atrophic macular degeneration. Proc.Natl.Acad.Sci.USA **118** e2102975118. PMID: 34620711.

Chang et al (2010) Increased cellular turnover in response to fluox. in neuronal precursors derived from human embryonic stem cells. Int.J.Dev.Biol. **54** 707. PMID: 19598107.

Beck et al (1997) Fluoxetine selectively alters 5-hydroxytryptamine_{1A} and γ -aminobutyric acid_B receptor-mediated hyperpolarization in area CA1, but not area CA3, hippocampal pyramidal cells. J.Pharmacol.Exp.Ther. **281** 115. PMID: 9103487.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

water to 10 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.

Licensing Information:

Sold with the permission of Eli Lilly and Company

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