

## Certificate Of Analysis

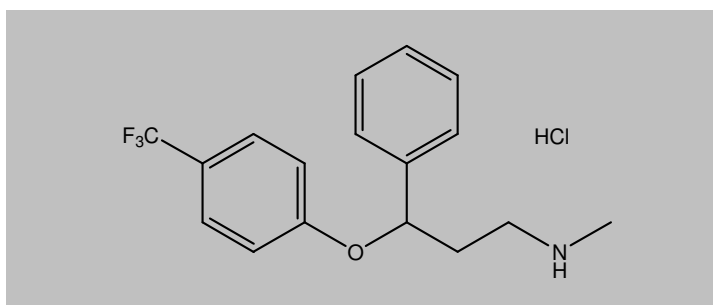
### Quality Control Testing and Research Application

COA Preparation Date: 09/04/2015  
COA Revision Date: 09/04/2018

**Product:** Fluoxetine hydrochloride  
**Cat. No.:** BG0197  
**Batch No.:** 0197BG/03  
**Chemical Name:** *N*-Methyl-3-phenyl-3-(4-(trifluoromethyl)phenoxy)propylamine hydrochloride;  
Prozac

#### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>17</sub>H<sub>18</sub>F<sub>3</sub>NO .HCl  
**Batch Molecular Weight:** 345.79  
**CAS No.:** [59333-67-4]  
**Physical Appearance:** White solid  
**Melting Point:** 156 - 158° C  
**Solubility:** Soluble to 10 mM in water or to 100 mM in DMSO  
**Storage:** RT  
**Batch Molecular Structure:**



#### Product Description:

**Selective Serotonin Reuptake Inhibitor (SSRI) and antidepressant. Binds to the human Serotonin Transporter (SERT) with a K<sub>i</sub> of 0.9 nM. Displays 150- and 900-fold selectivity over 5-HT<sub>1A</sub>, 5-HT<sub>2A</sub>, Histamine H<sub>1</sub>, α<sub>1</sub>-, α<sub>2</sub>-adrenergic and muscarinic receptors. Inhibits Cytochrome P450 CYP2C19, 2D6, 3A4, 3A5 and 3A7. Also exhibits potent antiinflammatory activity in human and murine models of Rheumatoid Arthritis and inhibits Toll-Like Receptors. Recently, it was shown that Fluoxetine treatment acts directly on raphe neurons to antagonize canonical Wnt signalling and enhance miR-16 maturation, thus inducing a downregulation of SERT and prolonging serotonergic signalling.**

#### References:

1. Benfield et al. (1986) *Drugs* 32:481; 2. Owens et al. (1997) *J Pharmacol Exp Ther* 283:1305; 3. Sacre et al. (2010) *Arthritis Rheum* 62:683; 4. Baudry et al. (2010) *Science* 329:1537; 5. Sandoz et al. (2011) *Proc Natl Acad Sci USA* 108:2605

- CAUTION - Not fully tested. For Research use only. Not for human use. -



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**BG0197 Fluoxetine hydrochloride**

**2. ANALYTICAL DATA**

HPLC: corresponds to the reference

MS: corresponds to the reference

Tests: Heavy Metals: < 20 ppm (complies); HPLC Assay: > 99% (complies).

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