Fluoxetine is a selective serotonin reuptake inhibitor, displaying a distinct preference for the serotonin transporter (Kd = 0.81 nM) over both the norepinephrine and dopamine transporters (Kd values of 240 and 3600 nM, respectively; Tatsumi et al.). This product is supplied as the hydrochloride salt of the molecule.

**Product Description**

Fluoxetine is a selective serotonin reuptake inhibitor, displaying a distinct preference for the serotonin transporter (Kd = 0.81 nM) over both the norepinephrine and dopamine transporters (Kd values of 240 and 3600 nM, respectively; Tatsumi et al.). This product is supplied as the hydrochloride salt of the molecule.

**Molecular Name:** Fluoxetine (Hydrochloride)

**Alternative Names:** LY110140

**CAS Number:** 56296-78-7

**Chemical Formula:** C₁₇H₁₈F₃NO · HCl

**Molecular Weight:** 345.8 g/mol

**Purity:** ≥ 98%

**Chemical Name:** methyl[3-phenyl-3-[4-(trifluoromethyl)phenoxy]propyl]ammonium chloride

**Structure:**

![Fluoxetine Structure](image)

**Properties**

**Physical Appearance:** A crystalline solid

**Storage:**

- Product stable at -20°C as supplied. Protect from prolonged exposure to light.
- Stable as supplied for 12 months from date of receipt.

**Solubility:**

- DMSO ≤ 35 mM
- Absolute ethanol ≤ 35 mM
- PBS (pH 7.2) ≤ 0.6 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 100 mg in 28.9 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

MAINTENANCE AND SELF-RENEWAL
- Induces proliferation and inhibits differentiation of human hypothalamic neuroprogenitor cells (Sousa-Ferreira et al.).
- Stimulates proliferation of mouse fetal neural stem cells (Chang et al. 2012).
- Stimulates in vivo proliferation of amplifying neural progenitor cells in adult mouse brain (Encinas et al.).

DIFFERENTIATION
- Induces proliferation of human embryonic stem cell-derived neural precursors, and enhances their neuronal differentiation (Chang et al. 2010).

References

Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).