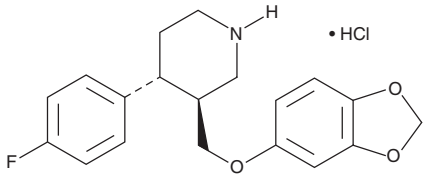
# PRODUCT INFORMATION

## Paroxetine (hydrochloride)

*Item No. 14998*

**CAS Registry No.:** 78246-49-8
**Formal Name:** (3S,4R)-3-[(1,3-benzodioxol-5-yloxy)methyl]-4-(4-fluorophenyl)-piperidine, monohydrochloride
**Synonym:** BRL 29060A
**MF:** $C_{19}H_{20}FNO_3 \bullet HCl$
**FW:** 365.8
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 235, 265, 271, 295 nm
**Supplied as:** A crystalline solid
**Storage:** -20°C
**Stability:** ≥4 years




*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

Paroxetine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the paroxetine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Paroxetine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of paroxetine (hydrochloride) in ethanol and DMSO is approximately 20 mg/ml and approximately 33 mg/ml in DMF.

Paroxetine (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, paroxetine (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Paroxetine (hydrochloride) has a solubility of approximately 0.09 mg/ml in a 1:10 solution of DMF:PBS (pH 7.0) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Paroxetine is a selective serotonin reuptake inhibitor (SSRI; $K_i$ = 0.04 nM).[1] It is selective for the serotonin transporter (SERT) over the dopamine and norepinephrine transporters ($K_i$s = 400 and 90 nM, respectively) as well as the serotonin (5-HT) receptor subtypes 5-$HT_{1A}$ and 5-$HT_{2A}$, the histamine $H_1$ receptor, $\alpha_1$- and $\alpha_2$-adrenergic receptors ($\alpha_2$-ARs), and muscarinic acetylcholine receptors (mAChRs; $K_i$s = 21,168, 6,320, 13,746, 995, 3,915, and 42 nM, respectively).[1,2] Paroxetine (5 mg/kg) decreases immobility time in the forced swim test in mice.[3] Formulations containing paroxetine have been used in the treatment of depression, obsessive-compulsive disorder (OCD), panic disorder, social and generalized anxiety disorders, and post-traumatic stress disorder (PTSD).

### References


1. Mattson, R.J., Catt, J.D., Denhart, D.J., *et al. J. Med. Chem.* Conformationally restricted homotryptamines. 2. Indole cyclopropylmethylamines as selective serotonin reuptake inhibitors. **48(19)**, 6023-6034 (2005).
2. Owens, M.J., Neal, W., Plott, S.J., *et al. J. Pharmacol. Exp. Ther.* Neurotransmitter receptor and transporter binding profile of antidepressants and their metabolites. **283(3)**, 1305-1322 (1997).
3. Sugimoto, Y., Tagawa, N., Kobayashi, Y., *et al.* Involvement of the sigma1 receptor in the antidepressant-like effects of fluvoxamine in the forced swimming test in comparison with the effects elicited by paroxetine. *Eur. J. Pharmacol.* **696(1-3)**, 96-100 (2012).





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