

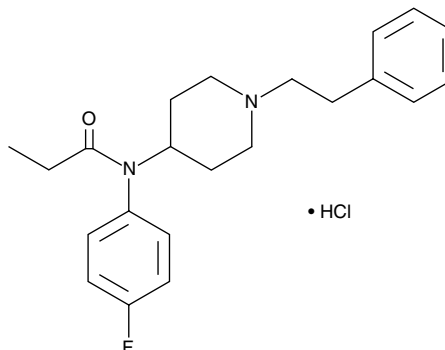
# Product Information



## *para*-Fluorofentanyl (hydrochloride)

Item No. 15496

**CAS Registry No.:** 117332-92-0  
**Formal Name:** N-(4-fluorophenyl)-N-[1-(2-phenylethyl)-4-piperidinyl]-propanamide, monohydrochloride  
**Synonyms:** 4-FF, NIH 10491, *p*-FF  
**MF:** C<sub>22</sub>H<sub>27</sub>FN<sub>2</sub>O • HCl  
**FW:** 390.9  
**Purity:** ≥95%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that *para*-Fluorofentanyl (*p*-FF) (hydrochloride) be stored as supplied at -20°C. It should be stable for at least two years.

*p*-FF (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the *p*-FF (hydrochloride) in the solvent of choice. *p*-FF (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of *p*-FF (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 10 mg/ml in DMSO and DMF.

*p*-FF (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, *p*-FF (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. *p*-FF (hydrochloride) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

*p*-FF is an analog of the narcotic analgesic fentanyl. Both compounds have been abused recreationally.<sup>1-2</sup> Both compounds potently activate the human  $\mu$  opioid receptor (EC<sub>50</sub>s = 4.2 and 28.8 nM for *p*-FF and fentanyl, respectively).<sup>3</sup> This product is intended for forensic and research purposes.

### References

- Henderson, G.L. Designer drugs: Past history and future prospects. *J. Forensic Sci.* **33**(2), 569-575 (1988).
- de Boer, D., Goemans, W.P., Ghezavat, V.R., *et al.* Seizure of illicitly produced *para*-fluorofentanyl: Quantitative analysis of the content of capsules and tablets. *J. Pharm. Biomed. Anal.* **31**(3), 557-562 (2003).
- Ulen, C., Van Boven, M., Daenens, P., *et al.* Interaction of *p*-fluorofentanyl on cloned human opioid receptors and exploration of the role of Trp-318 and His-319 in  $\mu$ -opioid receptor selectivity. *J. Pharmacol. Exp. Ther.* **294**(3), 1024-1033 (2000).

### Related Products

For a list of related products please visit: [www.caymanchem.com/catalog/15496](http://www.caymanchem.com/catalog/15496)

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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