

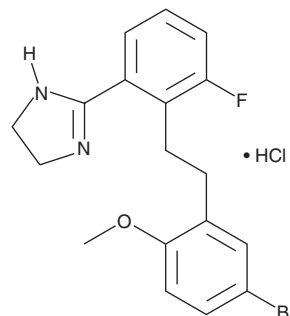
# PRODUCT INFORMATION



## ML-00253764 (hydrochloride)

Item No. 22473

**CAS Registry No.:** 1706524-94-8  
**Formal Name:** 2-[2-[2-(5-bromo-2-methoxyphenyl)ethyl]-3-fluorophenyl]-4,5-dihydro-1H-imidazole, monohydrochloride  
**MF:** C<sub>18</sub>H<sub>18</sub>BrFN<sub>2</sub>O • HCl  
**FW:** 413.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 227, 280 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

ML-00253764 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-00253764 (hydrochloride) in the solvent of choice. ML-00253764 (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 ML-00253764 (hydrochloride) in these solvents is approximately 1, 25, and 30 mg/ml, respectively.

ML-00253764 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-00253764 (hydrochloride) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ML-00253764 (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

ML-00253764 is a melanocortin receptor 4 (MC4R) antagonist ( $K_i = 0.16 \mu\text{M}$ ).<sup>1</sup> It is selective for MC4R over MC3R and MC5R ( $IC_{50}$ s = 0.32, 0.81, and 2.12  $\mu\text{M}$ , respectively).<sup>2</sup> ML-00253764 (100  $\mu\text{M}$ ) decreases cAMP production induced by [NLE<sup>4</sup>,D-Phe<sup>7</sup>]- $\alpha$ -melanocyte stimulating hormone ([NDP]- $\alpha$ -MSH; Item No. 24475) by 20% in MC4R-expressing HEK293 cell membranes, but has no effect on cAMP levels in MC3R- or MC5R-expressing membranes. It prevents the loss of lean body mass and enhances light-phase food consumption in a Lewis lung carcinoma (LLC) mouse model but does not reduce tumor size when administered at a dose of 15 mg/kg.

### References

1. Vos, T.J., Caracoti, A., Che, J.L., *et al.* Identification of 2-[2-[2-(5-bromo-2-methoxyphenyl)-ethyl]-3-fluorophenyl]-4,5-dihydro-1H-imidazole (ML00253764), a small molecule melanocortin 4 receptor antagonist that effectively reduces tumor-induced weight loss in a mouse model *J. Med. Chem.* **47**(7), 1602-1604 (2004).
2. Nicholson, J.R., Kohler, G., Schaerer, F., *et al.* Peripheral administration of a melanocortin 4-receptor inverse agonist prevents loss of lean body mass in tumor-bearing mice. *J. Pharmacol. Exp. Ther.* **317**(2), (2006).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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