

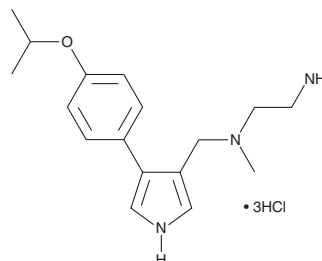
# PRODUCT INFORMATION



## MS023 (hydrochloride)

Item No. 18361

**CAS Registry No.:** 2108631-19-0  
**Formal Name:** N<sup>1</sup>-methyl-N<sup>1</sup>-[[4-[4-(1-methylethoxy)phenyl]-1H-pyrrol-3-yl]methyl]-1,2-ethanediamine, trihydrochloride  
**MF:** C<sub>17</sub>H<sub>25</sub>N<sub>3</sub>O • 3HCl  
**FW:** 396.8  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 250 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

MS023 (hydrochloride) is supplied a crystalline solid. A stock solution may be made by dissolving the MS023 (hydrochloride) in the solvent of choice. MS023 (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of MS023 (hydrochloride) in these solvents is approximately 30 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of MS023 (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of MS023 (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Protein arginine methyltransferases (PRMTs) post-translationally modify proteins, including histones, and in this way regulate gene expression, signal transduction, and protein-protein interactions.<sup>1</sup> MS023 is a potent, selective inhibitor of type I PRMTs (IC<sub>50</sub>s = 20, 119, 83, 8, and 8 nM for PRMT1, 3, 4, 6, and 8, respectively).<sup>2</sup> It is inactive against type II and type III PRMTs, as well as other types of MTs. MS023 is active in cells, inhibiting the dimethylation of histone 4 at Arg<sup>3</sup> by PRMT1 with an IC<sub>50</sub> value of 9 nM.<sup>2</sup> See the Structural Genomics Consortium (SGC) website for more information.

### References

1. Yang, Y. and Bedford, M.T. Protein arginine methyltransferases and cancer. *Nat. Rev. Cancer* **13**(1), 37-50 (2013).
2. Eram, M.S., Shen, Y., Szewczyk, M.M., *et al.* A potent, selective, and cell-active inhibitor of human type I protein arginine methyltransferases. *ACS Chem. Biol.* (2015).

#### 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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