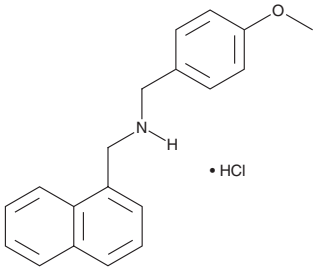
PRODUCT INFORMATION

ML-133 (hydrochloride)

Item No. 31232

CAS Registry No.:	1222781-70-5
Formal Name:	N-[(4-methoxyphenyl)methyl]-1-naphthalenemethanamine, monohydrochloride
MF:	$C_{19}H_{19}NO \bullet HCl$
FW:	313.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 224 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-133 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-133 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. ML-133 (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ML-133 (hydrochloride) in these solvents is approximately 1 mg/ml.

ML-133 (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-133 (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ML-133 (hydrochloride) has a solubility of approximately 0.50 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ML-133 is an inward-rectifier potassium channel 2 ($K_{ir}2$) inhibitor (IC_{50}s = 1.8, 2.8, 2,9, and 2.6 µM for $K_{ir}2.1$, $K_{ir}2.2$, $K_{ir}2.3$, and $K_{ir}2.6$, respectively).[1] It is selective for $K_{ir}2$ channels over $K_{ir}1.1$ and $K_{ir}4.1$ channels (IC_{50}s = 33 and 76 µM, respectively). ML-133 (10 and 30 nmol/animal) prevents the development of dynamic, but not punctate, mechanical allodynia in a mouse model of spared nerve injury.[2]

References

1. Wang, H.-R., Wu, M., Yu, H., *et al.* Selective inhibition of the Kir2 family of inward rectifier potassium channels by a small molecule probe: The discovery, SAR, and pharmacological characterization of ML133. *ACS Chem. Biol.* **6(8)**, 845-856 (2011).
2. Shi, Y., Chen, Y. and Wang, Y. Kir2.1 channel regulation of glycinergic transmission selectively contributes to dynamic mechanical allodynia in a mouse model of spared nerve injury. *Neurosci Bull.* **35(2)**, 301-314 (2019).

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