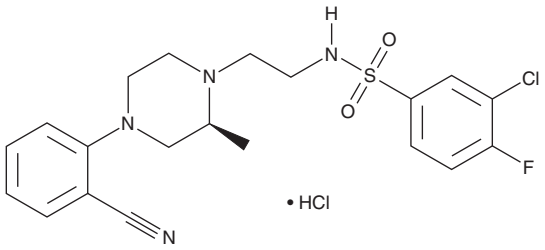
PRODUCT INFORMATION

VU6036720 (hydrochloride)

Item No. 40286

Formal Name:	(S)-3-chloro-N-(2-(4-(2-cyanophenyl)-2-methylpiperazin-1-yl)ethyl)-4-fluorobenzenesulfonamide, monohydrochloride
MF:	$C_{20}H_{22}ClFN_4O_2S \bullet HCl$
FW:	473.4
Purity:	≥95%
Supplied as:	A 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

VU6036720 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the VU6036720 (hydrochloride) in the solvent of choice which should be purged with an inert gas. VU6036720 (hydrochloride) is soluble in DMSO and is slightly soluble in acetonitrile.

VU6036720 (hydrochloride) is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

VU6036720 is an inhibitor of heteromeric inward-rectifier potassium channels (K_{ir}) composed of K_{ir}4.1 and K_{ir}5.1 subunits (IC_{50} = 0.24 µM).[1] It is selective for K_{ir}4.1/5.1 channels over a variety of homomeric K_{ir} channels, including K_{ir}4.1 (IC_{50} = >10 µM), as well as heteromeric K_{ir}3.1/3.2, K_{ir}3.1/3.4, K_{ir}6.2/SUR1, and K_{ir}6.1/SUR2b channels at 30 µM but does inhibit the voltage-gated potassium channel K_V11.1, also known as human ether-a-go-go (hERG; IC_{50} = 6.4 µM). VU6036720 (30 and 100 mg/kg) does not inhibit diuresis in mice due to low oral bioavailability and high hepatic clearance.

Reference

1. McClenahan, S.J., Kent, C.N., Kharade, S.V., *et al.* VU6036720: The first potent and selective in vitro inhibitor of heteromeric Kir4.1/5.1 inward rectifier potassium channels. *Mol. Pharmacol.* **101(5)**, 357-370 (2022).

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