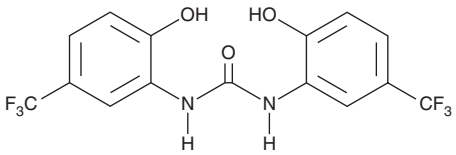
PRODUCT INFORMATION

NS 1643

Item No. 20343

CAS Registry No.:	448895-37-2
Formal Name:	N,N'-*bis*[2-hydroxy-5-(trifluoromethyl)phenyl]-urea
MF:	$C_{15}H_{10}F_6N_2O_3$
FW:	380.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 211, 240, 261, 292 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

NS 1643 is supplied as a crystalline solid. A stock solution may be made by dissolving the NS 1643 in the solvent of choice, which should be purged with an inert gas. NS 1643 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NS 1643 is approximately 10 mg/ml in ethanol and approximately 25 mg/ml in DMSO and DMF.

NS 1643 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NS 1643 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NS 1643 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.

Description

NS 1643 is an activator of the human ether-a-go-go related gene (ERG1, KCNH2, hERG) K_V11.1 channel (EC_{50} = 10.5 µM).[1,2] It also activates the K_V11.2 (ERG2, KCNH6) channel, but evokes a distinctly different response from that of K_V11.1.[3] NS 1643 is commonly used in cells or isolated tissues.[1,2,4]

References

1. Casis, O., Olesen S.-P., and Sanguinetti, M. C. Mechanism of action of a novel human ether-a-go-go-related gene channel activator. *Mol. Pharmacol.* **69(2)**, 658-665 (2006).
2. Hansen, R.S., Diness, T.G., Christ, T., *et al*. Activation of human ether-a-go-go-related gene potassium channels by the diphenylurea 1,3-bis-(2-hydroxy-5-trifluoromethyl-phenyl)-urea (NS1643). *Mol. Pharmacol.* **69(1)**, 266-277 (2006).
3. Elmedyb, P., Olesen, S.-P. and Grunnet, M. Activation of ERG2 potassium channels by the diphenylurea NS1643. *Neuropharmacology* **53(2)**, 283-294 (2007).
4. Killeen, M.J., Thomas, G., Olesen, S.-P., *et al*. Effects of potassium channel openers in the isolated perfused hypokalaemic murine heart. *Acta. Physiol. (Oxf)* **193(1)**, 25-36 (2008).

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