

Product Name: NS 1643

Catalog No.: 3062

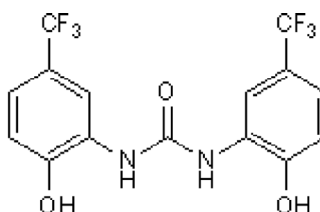
Batch No.: 2

CAS Number: 448895-37-2

IUPAC Name: *N,N'*-Bis[2-hydroxy-5-(trifluoromethyl)phenyl]urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₅H₁₀F₆N₂O₃
Batch Molecular Weight: 380.24
Physical Appearance: White solid
Solubility: ethanol to 100 mM
 DMSO to 25 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.0% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	47.38	2.65	7.37
Found	47.21	2.65	7.23

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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CAS Number: 448895-37-2

IUPAC Name: *N,N'*-Bis[2-hydroxy-5-(trifluoromethyl)phenyl]urea

Description:

NS 1643 is a human ether-a-go-go related gene (hERG) $K_{V11.1}$ channel activator ($EC_{50} = 10.5 \mu\text{M}$). Exhibits different molecular mechanisms of action at $K_{V11.1}$ (hERG1) and $K_{V11.2}$ (hERG2) channels. Displays antiarrhythmic activity in vitro.

Physical and Chemical Properties:

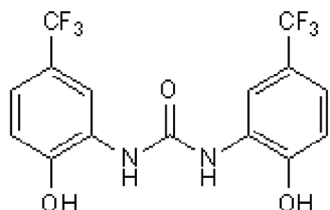
Batch Molecular Formula: $C_{15}H_{10}F_6N_2O_3$

Batch Molecular Weight: 380.24

Physical Appearance: White solid

Minimum Purity: $\geq 98\%$

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

ethanol to 100 mM

DMSO to 25 mM

CAUTION: This product has been shown to be unstable in physiological buffers and solutions should therefore be prepared and used as quickly as possible (Dinklo et. al. poster presented at the Strasbourg Safety Pharmacology meeting, 2009)

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Elmedy et al (2007) Activation of ERG2 potassium channel by the diphenylurea NS1643. *Neuropharmacology* **53** 283. PMID: 17610913.

Casis et al (2006) Mechanism of action of a novel human ether-a-go-go related gene channel activator. *Mol.Pharmacol.* **69** 658. PMID: 16284303.

Hansen et al (2006) 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** 266. PMID: 16219910.

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