Print Date: Mar 2nd 2017

Certificate of Analysis

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Product Name: **NS 3623** **Catalog No.: 4462** **Batch No.: 1**

CAS Number: 343630-41-1

IUPAC Name: *N*-[4-Bromo-2-(1*H*-tetrazol-5-yl-phenyl]-N'-[3-(trifluoromethyl)phenyl]-urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{15}H_{10}BrF_3N_6O$

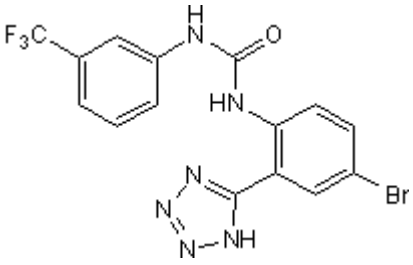
Batch Molecular Weight: 427.18

Physical Appearance: White solid

Solubility: DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.23 (Chloroform:Methanol [4:1])

HPLC: Shows 99.6% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	42.17	2.36	19.67
Found	42.19	2.22	19.52

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

Product Information

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IUPAC Name: *N*-[4-Bromo-2-(1*H*-tetrazol-5-yl-phenyl]-N'-[3-(trifluoromethyl)phenyl]-urea

Description:

K_V11.1 (hERG) and K_V4.3 channel activator. Activates the I_{Kr} and I_{to} currents and displays antiarrhythmic activity. May also act as a partial blocker of K_V11.1 channels. Displays selectivity over the key cardiac potassium channels, K_V7.1 (KCNQ1) and K_V1.5. Suitable for both in vitro and in vivo use.

Physical and Chemical Properties:

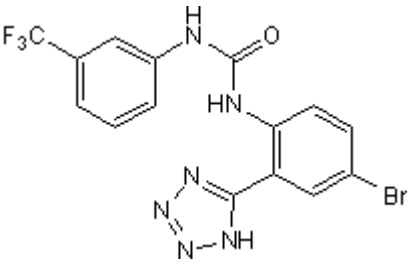
Batch Molecular Formula: $C_{15}H_{10}BrF_3N_6O$

Batch Molecular Weight: 427.18

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

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:

Calloe *et al* (2016) A dual potassium channel activator improves repolarization reserve and normalizes ventricular action potentials. Biochem.Pharmacol. ***108*** 36. PMID: 27002181 .

George (2009) Restoring repolarization in LQT3. Heart Rhythm. ***6*** 107. PMID: 19121809 .

Hansen *et al* (2007) Pharmacological activation of rapid delayed rectifier potassium current suppresses bradycardia-induced triggered activity in the isolated guinea pig heart. J.Pharmacol.Exp.Ther. ***321*** 996. PMID: 17325228.

Hansen *et al* (2006) Biophysical characterization of the new human ether-a-go-go-related gene channel opener NS3623 [*N*-(4-bromo-2-(1*H*-tetrazol-5-yl)-phenyl)-N'-(3'-trifluoromethylphenyl)urea]. Mol.Pharmacol. ***70*** 1319. PMID: 16825484.

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
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Tel:+1 612 379 2956