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Print Date: Apr 8th 2016

Certificate of Analysis

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Product Name: **QO 58** **Catalog No.: 5083** **Batch No.: 1**

CAS Number: 1259536-62-3

IUPAC Name: 5-(2,6-Dichloro-5-fluoro-3-pyridinyl)-3-phenyl-2-(trifluoromethyl)-pyrazolo[1,5-*a*]pyrimidin-7(4*H*)-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{18}H_8Cl_2F_4N_4O$

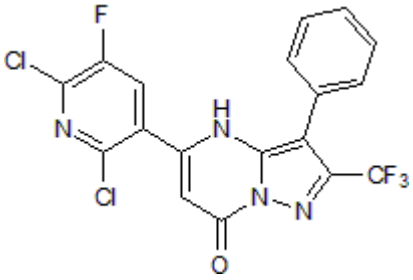
Batch Molecular Weight: 443.18

Physical Appearance: Off White solid

Solubility: DMSO to 50 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.15 (Dichloromethane:Methanol:Ammonia soln. [9:1:0.1])

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	48.78	1.82	12.64
Found	48.72	1.7	12.57

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Description:

K_v7 channel opener (EC_{50} values are 0.6, 1.0, 5.2 and 7.0 µM for $K_v7.4$, $K_v7.2$, $K_v7.3/7.5$ and $K_v7.1$, respectively). Increases the pain threshold of neuropathic pain in a sciatic nerve CCI in vivo model.

Physical and Chemical Properties:

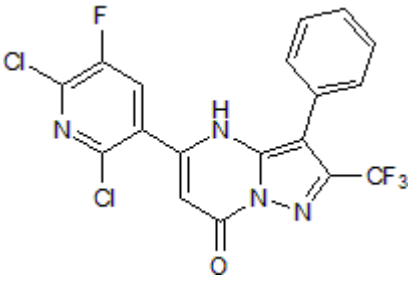
Batch Molecular Formula: $C_{18}H_8Cl_2F_4N_4O$

Batch Molecular Weight: 443.18

Physical Appearance: Off White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 50 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:

Zhang *et al* (2013) Modulation of K_v7 potassium channels by a novel opener pyrazolo[1,5-a]pyrimidin-7(4*H*)-one compound QO-58. Br.J.Pharmacol. ***168*** 1030. PMID: 23013484.

Qi *et al* (2011) Design, synthesis and biological activity of pyrazolo[1,5-a]pyrimidin-7(4*H*)-ones as novel K_v7/KCNQ potassium channel activators. Eur.J.Med.Chem. ***46*** 934. PMID: 21296466.