

Certificate of Analysis

Product Name: ICA 069673

Catalog No.: 4305

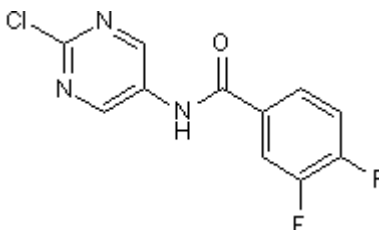
Batch No.: 2

CAS Number: 582323-16-8

IUPAC Name: *N*-(2-Chloro-5-pyrimidinyl)-3,4-difluorobenzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₁H₆ClF₂N₃O
Batch Molecular Weight: 269.63
Physical Appearance: White solid
Solubility: DMSO to 100 mM
ethanol to 25 mM
Storage: Store at RT
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.36 (Ethyl acetate:Petroleum ether [2:3])
HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	49	2.24	15.58
Found	49.02	2.38	15.56

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

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IUPAC Name: *N*-(2-Chloro-5-pyrimidinyl)-3,4-difluorobenzamide

Description:

Selective $K_{v7.2}/K_{v7.3}$ (KCNQ2/3) channel opener ($EC_{50} = 0.69 \mu\text{M}$). Exhibits 20-fold selectivity for $K_{v7.2}/K_{v7.3}$ over $K_{v7.3}/K_{v7.5}$, with no measurable activity over a panel of cardiac ion channels. Hyperpolarizes resting membrane potential and inhibits spontaneous action potentials in guinea pig detrusor muscle (DSM) isolated cells. Orally active in animal models of epilepsy.

Physical and Chemical Properties:

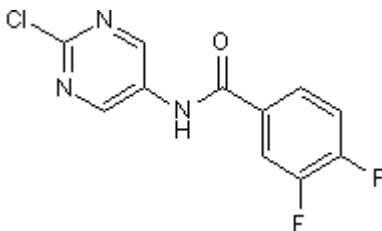
Batch Molecular Formula: $C_{11}H_6ClF_2N_3O$

Batch Molecular Weight: 269.63

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Amato et al (2011) *N*-pyridyl and pyrimidine benzamides as KCNQ2/Q3 potassium channel openers for the treatment of epilepsy. *ACS Med.Chem.Lett.* **2** 481. PMID: 24900334 .

Provence et al (2015) The novel $K_{v7.2}/K_{v7.3}$ channel opener ICA-069673 reveals subtype-specific functional roles in guinea pig detrusor smooth muscle excitability and contractility. *J.Pharmacol.Exp.Ther.* **354** 290. PMID: 26087697.

Storage: Store at RT

Solubility & Usage Info:

DMSO to 100 mM

ethanol to 25 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.

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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