

Certificate of Analysis

Product Name: ML 297

Catalog No.: 5380

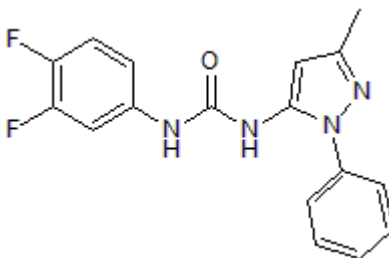
Batch No.: 1

CAS Number: 1443246-62-5

IUPAC Name: *N*-(3,4-Difluorophenyl)-*N'*-(3-methyl-1-phenyl-1*H*-pyrazol-5-yl)urea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₄F₂N₄O
Batch Molecular Weight: 328.32
Physical Appearance: White solid
Solubility: DMSO to 100 mM
 ethanol to 50 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

| | Carbon | Hydrogen | Nitrogen |
|-------------|--------|----------|----------|
| Theoretical | 62.19 | 4.3 | 17.06 |
| Found | 62.08 | 4.27 | 17 |

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

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Description:

Selective $K_{ir}3.1/3.2$ (GIRK1/2) channel activator (IC_{50} values are 160, 887 and 914 nM for GIRK1/2, GIRK1/4 and GIRK1/3 respectively). Exhibits no effect on GIRK2, GIRK2/3, $K_{ir}2.1$ and $K_{v}7.4$ channels, and has minimal effect on a panel of other ion channels, receptors and transporters. Prevents PTZ-induced epileptic seizures in mice. Brain penetrant.

Physical and Chemical Properties:

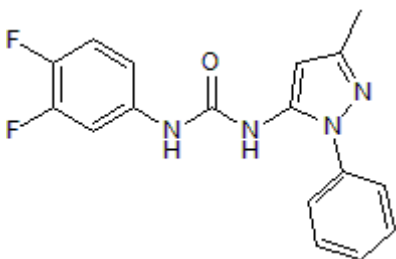
Batch Molecular Formula: $C_{17}H_{14}F_2N_4O$

Batch Molecular Weight: 328.32

Physical Appearance: White solid

Minimum Purity: >99%

Batch Molecular Structure:



References:

Kaufmann et al (2013) ML297 (VU0456810), the first potent and selective activator of the GIRK potassium channel, displays antiepileptic properties in mice. *ACS Chem.Neurosci.* **4** 1278. PMID: 23730969.

Wen et al (2013) Discovery of 'molecular switches' within a GIRK activator scaffold that afford selective GIRK inhibitors. *Bioorg.Med.Chem.Lett.* **23** 4562. PMID: 23838260.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol 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.

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