

Product Name: VU 0542270

Catalog No.: 8151

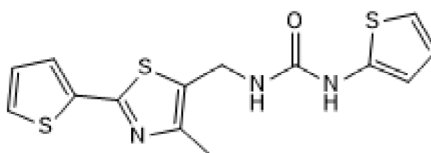
Batch No.: 1

CAS Number: 1396814-79-1

IUPAC Name: 1-[(4-Methyl-2-thiophen-2-yl-1,3-thiazol-5-yl)methyl]-3-thiophen-2-ylurea

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₄H₁₃N₃OS₃.
Batch Molecular Weight: 335.46
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.9% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.12	3.91	12.53
Found	49.89	3.83	12.36

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

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Description:

VU 0542270 is a selective inhibitor of Kir6.1/SUR2B K_{ATP} channels (IC₅₀ = 104 nM). Shows no activity at other Kir channel types at up to 30 μM. Dose-dependently induces constriction of ductus arteriosus vessels.

Physical and Chemical Properties:

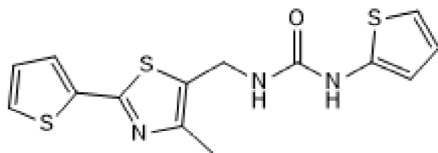
Batch Molecular Formula: C₁₄H₁₃N₃OS₃.

Batch Molecular Weight: 335.46

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°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. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

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:

Li *et al* (2024) Discovery and characterization of VU0542270, the first selective inhibitor of vascular Kir6.1/SUR2B K_{ATP} channels. *Mol.Pharmacol.* **105** 202. PMID: 38302135.

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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