

Product Name: BAY 41-2272

Catalog No.: 4430

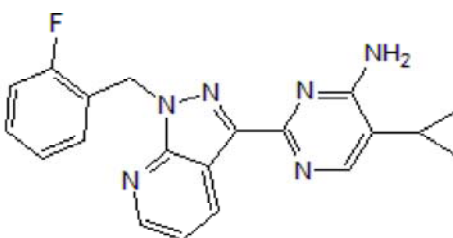
Batch No.: 2

CAS Number: 256376-24-6

IUPAC Name: 5-Cyclopropyl-2-[1-[(2-fluorophenyl)methyl]-1*H*-pyrazolo[3,4-*b*]pyridin-3-yl]-4-pyrimidinamine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₁₇FN₆
Batch Molecular Weight: 360.39
Physical Appearance: Off-white solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.8% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.66	4.75	23.32
Found	66.22	4.75	22.93

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

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Description:

Activator of soluble guanylyl cyclase (sGC); acts at a nitric oxide (NO)-independent regulatory site in the sGC α_1 subunit. Inhibits platelet aggregation (IC_{50} = 36 nM) and phenylephrine-induced contractions of rabbit aorta (IC_{50} = 0.30 μ M). Also reduces vascular smooth muscle growth through cAMP- and cGMP-dependent PKA and PKG pathways.

Physical and Chemical Properties:

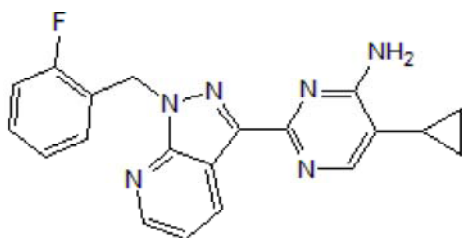
Batch Molecular Formula: C₂₀H₁₇FN₆

Batch Molecular Weight: 360.39

Physical Appearance: Off-white solid

Minimum Purity: \geq 98%

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:

Joshi et al (2011) The soluble guanylate cyclase stimulator BAY 41-2272 inhibits vascular smooth muscle growth through the cAMP-dependent protein kinase and cGMP-dependent protein kinase pathways. *J.Pharmacol.Exp.Ther.* **339** 394. PMID: 21825001.

Stasch et al (2010) NO-independent regulatory site on soluble guanylate cyclase. *Nature* **410** 212. PMID: 11242081.

Mittendorf et al (2009) Discovery of Riociguat (BAY 63-2521): a potent, oral stimulator of soluble guanylate cyclase for the treatment of pulmonary hypertension. *ChemMedChem* **4** 853. PMID: 19263460.

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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