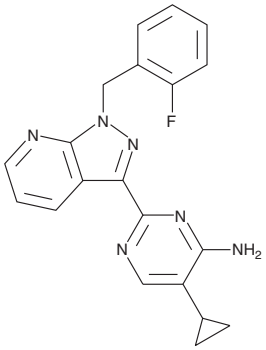
PRODUCT INFORMATION

BAY 41-2272

Item No. 10057



CAS Registry No.:	256376-24-6
Formal Name:	5-cyclopropyl-2-[1-[(2-fluorophenyl) methyl]-1H-pyrazolo[3,4-b]pyridin-3-yl]-4-pyrimidinamine
MF:	$C_{20}H_{17}FN_6$
FW:	360.4
Purity:	≥95%
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 214, 255, 322 nm
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis

Laboratory Procedures

BAY 41-2272 is supplied as a crystalline solid. A stock solution may be made by dissolving the BAY 41-2272 in the solvent of choice. BAY 41-2272 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of BAY 41-2272 in these solvents is approximately 0.16, 12.5, and 16.6 mg/ml, respectively.

BAY 41-2272 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BAY 41-2272 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. BAY 41-2272 has a solubility of approximately 0.14 mg/ml in a 1:6 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Soluble guanylate cyclase (sGC), a receptor for nitric oxide (NO), is a heterodimer consisting of alpha and beta subunits, with the beta subunit featuring a heme-nitric oxide (H-NOX) binding domain.[1] The binding of NO to H-NOX induces sGC to generate the second messenger cGMP. BAY 41-2272 is a pyrazolopyridine compound that acts as an activator of sGC, stimulating activity to a level that would be expected to cause biologically important increases in cGMP at concentrations as low as 10-100 nM.[2] Through this effect, it inhibits platelet aggregation (IC_{50} = 36 nM), induces relaxation of phenylephrine-preconstricted rabbit aorta rings (IC_{50} = 304 nM), and reduces proliferation in smooth muscle.[2,3] BAY 41-2272 is effective *in vivo*, as it decreases mean arterial blood pressure in hypertensive rats.[2] Unlike another sGC activator, YC-1 (Item No. 81560), BAY 41-2772 does not inhibit phosphodiesterases.[4]

References

1. Derbyshire, E.R. and Marletta, M.A. *Annu. Rev. Biochem.* **81**, 533-559 (2012).
2. Stasch, J.-P., Becker, E.M., Alonso-Alija, C., *et al. Nature* **410**, 212-215 (2001).
3. Evgenov, O.V., Pacher, P., Schmidt, P.M., *et al. Nat. Rev. Drug Discov.* **5(9)**, 755-768 (2006).
4. Stasch, J.-P., Alonso-Alija, C., Apeler, H., *et al. Br. J. Pharmacol.* **135**, 333-343 (2002).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM