PRODUCT INFORMATION



ML-141

Item No. 18496

CAS Registry No.:	71203-35-5	0.0
Formal Name:	4-[4,5-dihydro-5-(4-methoxyphenyl)-	
	3-phenyl-1H-pyrazol-1-yl]- benzenesulfonamide	NH ₂
Synonym:	CID-2950007	
		\sim χ N \sim
MF:	$C_{22}H_{21}N_{3}O_{3}S$	
FW:	407.5	
Purity:	≥98%	\rightarrow
UV/Vis.:	λ _{max} : 229, 274, 357 nm	$\langle \rangle \rangle$
Supplied as:	A crystalline solid	
Storage:	-20°C	
Stability:	≥4 years	0—
Information memory that the number of the strength of the stre		

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

Laboratory Procedures

ML-141 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-141 in the solvent of choice, which should be purged with an inert gas. ML-141 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of ML-141 in these solvents is approximately 20 and 30 mg/ml, respectively.

ML-141 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-141 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ML-141 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Cdc42 is a member of the Rho GTPase subfamily that has roles in cytoskeleton organization, cell cycle progression, signal transduction, and vesicle trafficking. It cycles between a GTP-bound active state and a GDP-bound inactive state. ML-141 is a noncompetitive, allosteric inhibitor of Cdc42 (EC₅₀ = 2.1μ M) with no inhibitory action against Rho, Ras, Rab, or Rac.^{1,2} It also inhibits the constitutively active Čdc42 Q61L mutant (EC₅₀ = 2.6 μM).¹ ML-141 blocks Cdc42-dependent filopodia formation in 3T3 cells and migration of ovarian cancer cells, prevents Cdc42-regulated virus infection, and inhibits the signaling pathway of VLA-4 integrin.¹ It is a useful tool to interrogate the role of Cdc42 intracellular signaling and cell activity.^{3,4}

References

- 1. Hong, L., Kenney, S.R., Phillips, G.K., et al. Characterization of a Cdc42 protein inhibitor and its use as a molecular probe. J. Biol. Chem. 288(12), 8531-8543 (2013).
- 2. Surviladze, Z., Waller, A., Strouse, J.J., et al. A potent and selective inhibitor of Cdc42 GTPase, National Center for Biotechnolog Information, in Probe Reports from the NIH Molecular Libraries Program, (2010).
- 3. Kalwat, M.A., Yoder, S.M., Wang, Z., et al. A p21-activated kinase (PAK1) signaling cascade coordinately regulates F-actin remodeling and insulin granule exocytosis in pancreatic β cells. Biochem. Pharmacol. 85(6), 808-816 (2013).
- 4. Pinzaglia, M., Montaldo, C., Polinari, D., et al. EIF6 over-expression increases the motility and invasiveness of cancer cells by modulating the expression of a critical subset of membrane-bound proteins. BMC Cancer 15, 131-146 (2015).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/13/2023

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