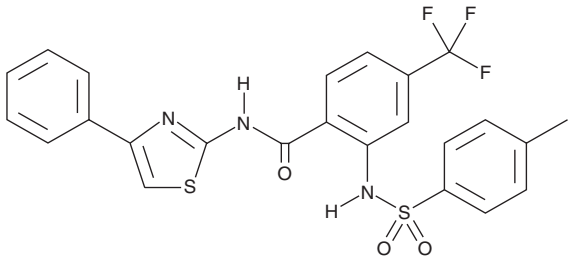
PRODUCT INFORMATION

ML-364

Item No. 21774

CAS Registry No.:	1991986-30-1
Formal Name:	2-[[(4-methylphenyl)sulfonyl]amino]-N-(4-phenyl-2-thiazolyl)-4-(trifluoromethyl)-benzamide
MF:	$C_{24}H_{18}F_3N_3O_3S_2$
FW:	517.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 232, 329 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

ML-364 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-364 in the solvent of choice, which should be purged with an inert gas. ML-364 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ML-364 in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

ML-364 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-364 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ML-364 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ML-364 is a reversible inhibitor of ubiquitin-specific protease 2 (USP2), a deubiquitinase, that has an IC_{50} value of 1.1 µM in a fluorescence-based assay using di-ubiquitin substrates.[1] It inhibits USP8, which is closely related to USP2, with an IC_{50} value of 0.95 µM in the same assay. It has no activity at the proteases caspase-6, caspase-7, MMP-1, MMP-9, and USP15 or at 102 kinases in a panel including cell cycle regulators. ML-364 increases cyclin D1 degradation (IC_{50} = 0.97 µM) in HCT116 colorectal carcinoma cells. It induces arrest of the cell cycle at the G_1 phase in Mino mantle cell lymphoma and HCT116 cells and inhibits proliferation of HCT116 cells (IC_{50} = 3.6 µM). It also decreases homologous recombination-mediated DNA repair in DR-GFP U2OS cells.

Reference

1. Davis, M.I., Pragani, R., Fox, J.T., *et al.* Small molecule inhibition of the ubiquitin-specific protease USP2 accelerates cyclin D1 degradation and leads to cell cycle arrest in colorectal cancer and mantle cell lymphoma models. *J. Biol. Chem.* **291(47)**, 24628-24640 (2016).

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