

PRODUCT INFORMATION

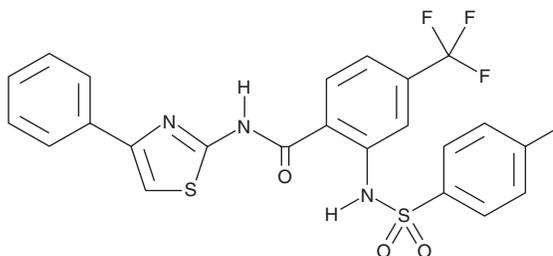


ML-364

Item No. 21774

CAS Registry No.: 1991986-30-1
Formal Name: 2-[[[4-(4-methylphenyl)sulfonyl]amino]-N-(4-phenyl-2-thiazolyl)-4-(trifluoromethyl)-benzamide]

MF: C₂₄H₁₈F₃N₃O₃S₂
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 IC₅₀ 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 IC₅₀ 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 (IC₅₀ = 0.97 μM) in HCT116 colorectal carcinoma cells. It induces arrest of the cell cycle at the G₁ phase in Mino mantle cell lymphoma and HCT116 cells and inhibits proliferation of HCT116 cells (IC₅₀ = 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).

WARNING

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

SAFETY 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.

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