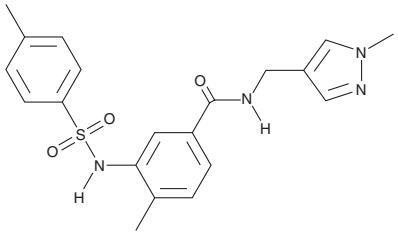
PRODUCT INFORMATION

S-72

Item No. 39083

CAS Registry No.:	2446799-14-8
Formal Name:	4-methyl-3-[[(4-methylphenyl) sulfonyl]amino]-N-[(1-methyl-1H-pyrazol-4-yl)methyl]-benzamide
MF:	$C_{20}H_{22}N_4O_3S$
FW:	398.5
Purity:	≥98%
Supplied as:	A 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

S-72 is supplied as a solid. A stock solution may be made by dissolving the S-72 in the solvent of choice, which should be purged with an inert gas. S-72 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of S-72 in ethanol is approximately 30 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

S-72 is an inhibitor of microtubule polymerization.[1] It inhibits microtubule polymerization in a cell-free assay when used at concentrations 1, 3, and 10 µM. S-72 reduces viability in MCF-7 and paclitaxel-resistant MCF-7/T breast cancer cells (IC_{50}s = 15.64 and 26.32 nM, respectively). It inhibits migration and invasion, as well as the percentage of wound closure in a scratch assay, in MCF-7 and MCF-7/T cells when used at a concentration of 50 nM. S-72 (100 nM) induces cell cycle arrest at the G_2/M phase in MCF-7/T cells, as well as induces apoptosis in those same cells. It also inhibits stimulator of interferon genes (STING) activation in MCF-7/T cells when used at a concentration of 100 nM. S-72 (15 mg/kg per day) inhibits tumor growth in MCF-7/T and MX-1/T mouse xenograft models of paclitaxel-resistant breast cancer.

Reference

1. Hou, Z., Lin, S., Du, T., *et al.* S-72, a novel orally available tubulin inhibitor, overcomes paclitaxel resistance via inactivation of the STING pathway in breast cancer. *Pharmaceuticals (Basel)* **16(5)**, 749 (2023).

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