

# PRODUCT INFORMATION



## ML-264

Item No. 18880

**CAS Registry No.:** 1550008-55-3  
**Formal Name:** (2E)-3-(3-chlorophenyl)-N-[2-[methyl(tetrahydro-1,1-dioxido-2H-thiopyran-4-yl)amino]-2-oxoethyl]-2-propenamide

**MF:** C<sub>17</sub>H<sub>21</sub>ClN<sub>2</sub>O<sub>4</sub>S

**FW:** 384.9

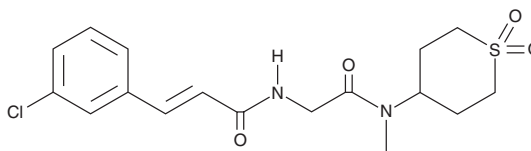
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 219, 268 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-264 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-264 in the solvent of choice, which should be purged with an inert gas. ML-264 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of ML-264 in these solvents is approximately 10 and 15 mg/ml, respectively.

ML-264 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-264 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ML-264 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

ML-264 is a selective inhibitor of Krüppel-like factor 5 (KLF5), a zinc finger-containing transcription factor that is highly expressed in rapidly dividing intestinal epithelial cells. It displays an IC<sub>50</sub> value of 29 nM in a cell-based assay for proliferation of KLF5-expressing DLD-1 cells and an IC<sub>50</sub> value of 81 nM in a cell-based luciferase assay but does not inhibit kinases associated with the KLF5 pathway, as determined using a panel of 47 selected kinases.<sup>1</sup> ML-264 induces death in most colon cancer cell lines (HCT116, IC<sub>50</sub> = 560 nM; HT-29, IC<sub>50</sub> = 130 nM; SW620, IC<sub>50</sub> = 430 nM), with cytotoxicity toward an established xenograft mouse model of colon cancer as well.<sup>1,2</sup>

### References

1. A. Bialkowska, A., M. Crisp, M., F. Maddoux, F., *et al.* ML264: An antitumor agent that potently and selectively inhibits krüppel-like factor five (KLF5) expression: A probe for studying colon cancer development and progression. Probe Reports from the NIH Molecular Libraries Program, (2011).
2. de Sabando, A.R., Wang, C., He, Y., *et al.* ML264, a novel small-molecule compound that potently inhibits growth of colorectal cancer. *Mol. Cancer Ther.* **15**(1), 72-83 (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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