

PRODUCT INFORMATION



ML-162

Item No. 20455

CAS Registry No.: 1035072-16-2
Formal Name: α -[(2-chloroacetyl)
(3-chloro-4-methoxyphenyl)
amino]-N-(2-phenylethyl)-2-
thiopheneacetamide

MF: C₂₃H₂₂Cl₂N₂O₃S
FW: 477.4

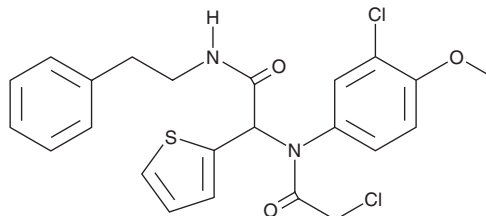
Purity: \geq 95%

UV/Vis.: λ_{max} : 279 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

ML-162 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-162 in the solvent of choice, which should be purged with an inert gas. ML-162 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ML-162 in these solvents is approximately 1, 25, and 10 mg/ml, respectively.

ML-162 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-162 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ML-162 has a solubility of approximately 0.2 mg/ml in a 1:4 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-162 is an inhibitor of glutathione peroxidase 4 (GPX4).¹ It decreases GPX4 levels in MDA-MB-231 breast cancer cells, as well as the viability of BT-549 breast cancer cells, an effect that is enhanced by α -eleostearic acid (9(Z),11(E),13(E)-octadecatrienoic acid; Item No. 10008349). ML-162 is also selectively lethal to mutant RAS oncogene-expressing cells (IC₅₀s = 25 and 578 nM for HRAS^{G12V}-expressing and wild-type RAS-expressing BJeH cells, respectively).²

References

- Beatty, A., Singh, T., Tyurina, Y.Y., *et al.* Ferroptotic cell death triggered by conjugated linolenic acids is mediated by ACSL1. *Nat. Commun.* **12**(1), 2244 (2021).
- Weißer, M., Bittker, J.A., Lewis, T.A., *et al.* Development of small-molecule probes that selectively kill cells induced to express mutant RAS. *Bioorg. Med. Chem. Lett.* **22**(4), 1822-1826 (2012).

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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