

**Product Name:** ML 162

**Catalog No.:** 7821

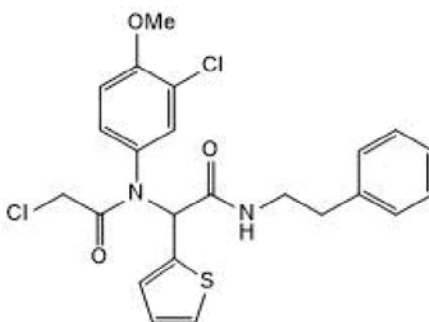
**Batch No.:** 1

CAS Number: 1035072-16-2

IUPAC Name: 2-[(Chloroacetyl)(3-chloro-4-methoxyphenyl)amino]-N-(2-phenylethyl)-2-thien-2-ylacetamide

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>23</sub>H<sub>22</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub>S  
**Batch Molecular Weight:** 477.41  
**Physical Appearance:** Off-white solid  
**Solubility:** DMSO to 100 mM  
ethanol to 20 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 99.4% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	57.86	4.65	5.87
Found	57.74	4.55	5.7

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

ML 162 is a covalent glutathione peroxidase 4 (GPX4) inhibitor. It induces ferroptosis *in vivo*. It is selectively lethal to mutant RAS oncogene-expressing cell lines (IC<sub>50</sub> = 25 and 578 nM for HRAS<sup>G12V</sup>-expressing and wild-type BJ fibroblasts, respectively).

**Physical and Chemical Properties:**

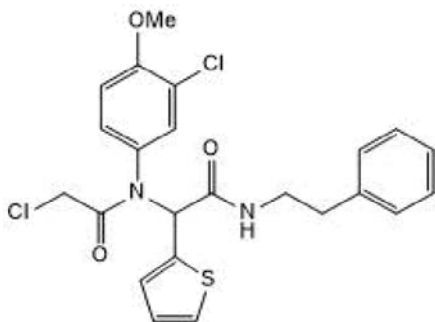
Batch Molecular Formula: C<sub>23</sub>H<sub>22</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>3</sub>S

Batch Molecular Weight: 477.41

Physical Appearance: Off-white solid

**Minimum Purity:** ≥98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

ethanol to 20 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Karaj *et al*** (2022) Tunable cysteine-targeting electrophilic heteroaromatic warheads induce ferroptosis. *J.Med.Chem.* **65** 11788. PMID: 35984756.

**Luo *et al*** (2022) Intracellular delivery of glutathione peroxidase degrader induces ferroptosis *in vivo*. *Angew.Chem.Int.Ed.Engl.* **39** e202206277. PMID: 35924720.

**Weiwer *et al*** (2012) Development of small-molecule probes that selectively kill cells induced to express mutant RAS. *Bioorg.Med.Chem.Lett.* **22** 1822. PMID: 22297109.

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