



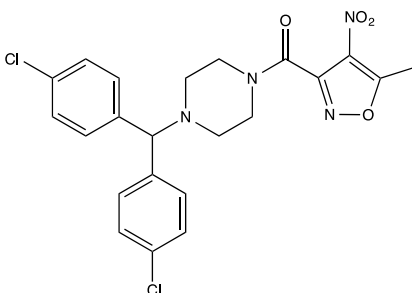
Catalog # 10-4002

ML210

CAS# 1360705-96-9

(4-(Bis(4-chlorophenyl)methyl)piperazine-1-yl)(5-methyl-4-nitroisoxazol-3-yl)methanone

Lot # FBA5128



ML210 is selectively synthetic lethal to HRAS expressing cells compared to isogenic non-HRAS cells ($IC_{50} = 7.1$ nM for BJeLR (expressing HRAS^{G12V}) cells vs $IC_{50} = 272$ nM for BJeH-LT (non-HRAS expressing) cells.¹ ML210 is able to inhibit glutathione peroxidase 4 (GPX4), an important selenoenzyme that protects cells from ferroptosis caused by iron catalyzed formation of free radicals from lipid peroxides.^{2,3} Treatment of several treatment-resistant cancer cell lines exhibiting a high mesenchymal state with ML210 resulted in selective induction of ferroptosis.³

- 1) Weiwer *et al.* (2012), *Development of small-molecule probes that selectively kill cells induced to express mutant RAS*; *Bioorg.Med.Chem.Lett.* **22** 1822
- 2) Yang *et al.* (2014), *Regulation of Ferroptotic Cancer Cell Death by GPX4*; *Cell* **156** 317
- 3) Viswanathan *et al.* (2017), *Dependency of a therapy-resistant state of cancer cells on a lipid peroxidase pathway*; *Nature* **547** 453

PHYSICAL DATA

Molecular Weight: 475.32
Molecular Formula: C₂₂H₂₀Cl₂N₄O₄
Purity: 99% by HPLC
NMR: (Conforms)
Solubility: DMSO (> 30 mg/ml)
Physical Description: White solid

Storage and Stability: Store as supplied at room temperature for up to 1 year from the date of purchase.
Solutions in DMSO may be stored at -20°C for up to 3 months.

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