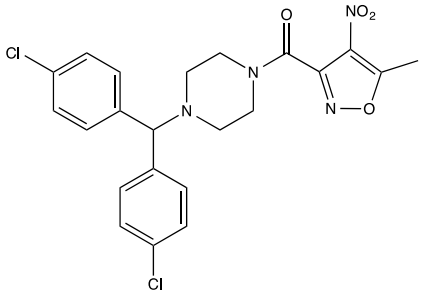
Catalog # 10-4002

ML210

CAS# 1360705-96-9

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

Lot # FBA8143



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:	$C_{22}H_{20}Cl_2N_4O_4$
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (> 30 mg/ml)
Physical Description:	Off-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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