



# Erastin

# Data Sheet

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<b>Catalog Number:</b>	MC11118	<b>Product Type:</b>	Small Molecule
<b>Bio-Activity:</b>	Ferroptosis inducer	<b>CAS #:</b>	571203-78-6
<b>Research Categories:</b>	Cell death, cellular stress, cancer	<b>Chemical Name:</b>	2-[1-[4-[2-(4-Chlorophenoxy)acetyl]-1-piperazinyl]ethyl]-3-(2-ethoxyphenyl)-4(3H)-quinazolinone
<b>Solubility:</b>	Soluble in DMSO (up to 10 mg/ml with warming).	<b>Molecular Formula:</b>	C30H31ClN4O4
<b>Purity:</b>	> 98%	<b>Molecular Weight:</b>	547.04
<b>Format:</b>	Powder	<b>Ship Temp:</b>	Ambient
<b>Storage:</b>	-20°C		

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## Application Notes

### Description/Data:

Ferroptosis inducer [1]. Inhibits the cystine-glutamate antiporter, system Xc- leading to activation of an ER stress response [2]. Inhibition of system Xc- leads to cysteine starvation, glutathione depletion and induction of ferroptosis [3]. Also blocks mitochondrial voltage-dependent anion channels (specifically VDAC2 and 3) [4].

### References:

- 1) Dolma et al. (2003), Identification of genotype-selective antitumor agents using synthetic lethal chemical screening in engineered human tumor cells; *Cancer Cell*, 3 285
- 2) Dixon et al. (2014), Pharmacological inhibition of cysteine-glutamate exchange induces endoplasmic reticulum stress and ferroptosis; *Elife*, 3 e02523
- 3) Sato et al. (2018), The ferroptosis inducer erastin irreversibly inhibits system xc- and synergizes with cisplatin to increase cisplatin's cytotoxicity in cancer cells; *Sci. Rep.*, 8 968
- 4) Yagoda et al. (2007), RAS-RAF-MEK-dependent oxidative cell death involving voltage-dependent anion channels; *Nature*, 447 864

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