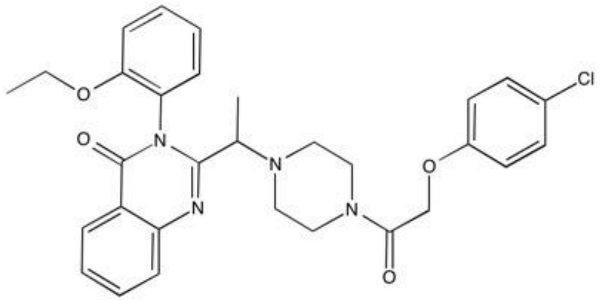
Catalog # 10-3406

Erastin

CAS# 571203-78-6

2-[1-[4-[2-(4-Chlorophenoxy)acetyl]-1-piperazinyl]ethyl]-3-(2-ethoxyphenyl)-4(3*H*)-quinazolinone

Lot # X108351



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

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 cystine-glutamate exchange induces endoplasmic reticulum stress and ferroptosis*; Elife, **3** e02523
3) Sato *et al*. (2018), *The ferroptosis inducer erastin irreversibly inhibits system x_c- 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

PHYSICAL DATA

Molecular Weight:	547.04
Molecular Formula:	$C_{30}H_{31}ClN_4O_4$
Purity:	98% by HPLC/TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 10 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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