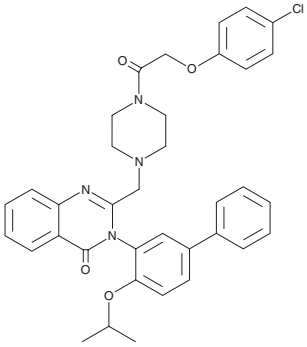
PRODUCT INFORMATION

Erastin2

Item No. 27087



CAS Registry No.:	1695533-44-8
Formal Name:	2-[[4-[2-(4-chlorophenoxy)acetyl]-1-piperazinyl]methyl]-3-[4-(1-methylethoxy)[1,1'-biphenyl]-3-yl]-4(3H)-quinazolinone
Synonym:	35MEW28
MF:	$C_{36}H_{35}ClN_4O_4$
FW:	623.1
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Erastin2 is supplied as a crystalline solid. A stock solution may be made by dissolving the erastin2 in the solvent of choice. Erastin2 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of erastin2 in these solvents is approximately 1 and 10 mg/ml, respectively.

Erastin2 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, erastin2 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Erastin2 has a solubility of approximately 0.25 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Erastin2 is a ferroptosis inducer and an inhibitor of the system x_c^- cystine/glutamate transporter.[1,2] It inhibits glutamate release in CCF-STTG1 cells (IC_{50} = 0.0035 µM).[2] It induces cell death in HAP1 cells when used at a concentration of 5 µM, an effect that can be blocked by the ferroptosis inhibitor ferrostatin-1 (Item No. 17729) or deferoxamine (Item No. 14595).[1] Erastin2 also induces ferroptotic cell death in HT-1080 cells (EC_{50} = 0.15 µM), an effect that can be blocked by the reducing agent β-mercaptoethanol (EC_{50} = >20 µM).[3] It increases lipid peroxidation in HT-1080 cells when used at a concentration of 1 µM.

References

1. Cao, J.Y., Poddar, A., Magtanong, L., *et al.* A genome-wide haploid genetic screen identifies regulators of glutathione abundance and ferroptosis sensitivity. *Cell Rep.* **26(6)**, 1544-1556 (2019).
2. Dixon, S.J., Patel, D.N., Welsch, M., *et al.* Pharmacological inhibition of cystine-glutamate exchange induces endoplasmic reticulum stress and ferroptosis. *Elife* **3**, e02523 (2014).
3. Magtanong, L., Ko, P.-J., To, M., *et al.* Exogenous monounsaturated fatty acids promote a ferroptosis-resistant cell state. *Cell Chem. Biol.* **26(3)**, 420-432 (2019).

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