

PRODUCT INFORMATION



Piperazine Erastin

Item No. 36934

CAS Registry No.: 1538593-71-3
Formal Name: 2-[[4-[2-(4-chlorophenoxy)acetyl]-1-piperazinyl]methyl]-3-[2-(1-methylethoxy)-5-(1-piperazinylmethyl)phenyl]-4(3H)-quinazolinone

MF: C₃₅H₄₁ClN₆O₄

FW: 645.2

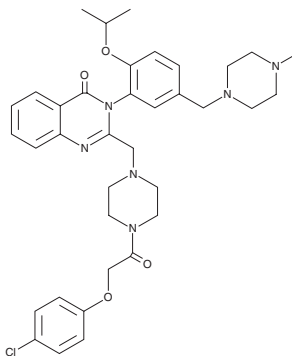
Purity: ≥98%

UV/Vis.: λ_{max}: 227 nm

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Piperazine erastin is supplied as a solid. A stock solution may be made by dissolving the piperazine erastin in the solvent of choice, which should be purged with an inert gas. Piperazine erastin is soluble in the organic solvent DMSO at a concentration of approximately 10 mg/ml.

Description

Piperazine erastin is an inducer of ferroptosis.^{1,2} It inhibits glutamate release in human CCF-STTG1 astrocytoma cells (IC₅₀ = 0.8 μM), indicating inhibition of the system x_c⁻ cystine/glutamate transporter, and decreases glutathione (GSH) levels in HT-1080 fibrosarcoma cells when used at a concentration of 10 μM. Piperazine erastin inhibits the growth of BJeLR cells overexpressing the H-Ras activating mutation H-Ras^{G12V} (IC₅₀ = 0.3 μM).¹ It increases hepatic mRNA expression of the gene encoding Cox-2 and prevents tumor formation in an HT-1080 mouse xenograft model when administered at a dose of 60 mg/kg.²

References

1. Larraufie, M.-H., Yang, W.S., Jiang, E., *et al.* Incorporation of metabolically stable ketones into a small molecule probe to increase potency and water solubility. *Bioorg. Med. Chem. Lett.* **25(21)**, 4787-4792 (2015).
2. Yang, W.S., SriRamaratnam, R., Welsch, M.E., *et al.* Regulation of ferroptotic cancer cell death by GPX4. *Cell* **156(1-2)**, 317-331 (2014).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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