

Product Data Sheet

Product Name: Ferroptosis inducer-12

Cat. No.: GC81545

Chemical Properties

Cas. No.

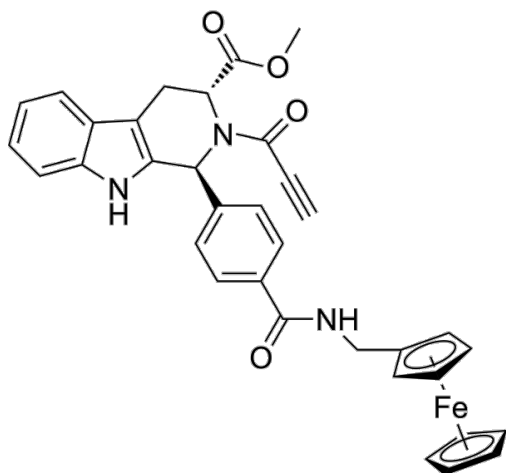
Formula $C_{34}H_{29}FeN_3O_4$ M.Wt 599.46

Solubility DMSO: 100 mg/mL (166.82 mM; Need ultrasonic) Storage Store at 4°C, protect from light

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Caution: Product has not been fully validated for medical applications. For research use only.

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Background

Ferroptosis inducer-12 is a potent and selective ferroptosis inducer. Ferroptosis inducer-12 exhibits potent antiproliferative activity against HT1080 and OS-RC-2, with IC₅₀ values of 3 nM and 5 nM, respectively. Ferroptosis inducer-12 strongly inhibits GPX4 enzymatic activity, induces intracellular ROS and elevates intracellular Fe²⁺ levels in OS-RC-2 cells. Ferroptosis inducer-12 significantly inhibits tumor growth in BALB/c nude mice bearing OS-RC-2 xenografts. Ferroptosis inducer-12 can be used for the study of cancer [1].

In Vivo, Ferroptosis inducer-12 (Compound A6) (25-50 mg/kg, i.p., once every 3 days for 27 days) significantly inhibits tumor growth in BALB/c nude mice bearing OS-RC-2 xenografts [1].

In Vitro, Ferroptosis inducer-12 (Compound A6) (48 h) exhibits potent antiproliferative activity against HT1080 and OS-RC-2, with IC₅₀ values of 3 nM (HT1080) and 5 nM (OS-RC-2) [1]. Ferroptosis inducer-12 (1 μM, 2 h) strongly inhibits glutathione peroxidase 4 (GPX4) enzymatic activity in OS-RC-2 cells [1]. Ferroptosis inducer-12 (0.5 μM, 4 h) induces intracellular ROS, elevates intracellular Fe²⁺ levels and promotes lipid peroxidation (LPO) accumulation in OS-RC-2 cells [1]. Ferroptosis inducer-12 (10 nM, 24 h) significantly suppresses migration and reduces invasive capacity of OS-RC-2 cells [1].

References:

[1]. Wang J, et al. Structural optimization and biological evaluation of ferrocene-appended RSL3 derivatives as potent ferroptosis inducers. Eur J Med Chem. 2025 Sep 16;301:118162.

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