# Product Data Sheet

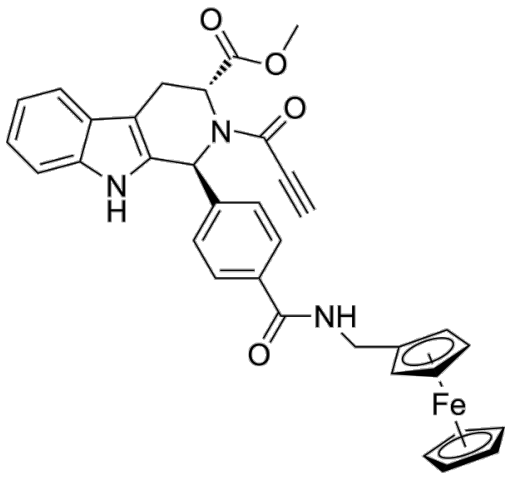
Product Name: Ferroptosis inducer-12
Cat. No.: GC81545

## 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



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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 $IC_{50}$ values of 3 nM and 5 nM, respectively. Ferroptosis inducer-12 strongly inhibits GPX4 enzymatic activity, induces intracellular ROS and elevates intracellular Fe 2+ 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 $IC_{50}$ 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.

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