

Product Data Sheet

Product Name: Ferfluor-1

Cat. No.: GC78979

Chemical Properties

Cas. No. 3030473-59-4

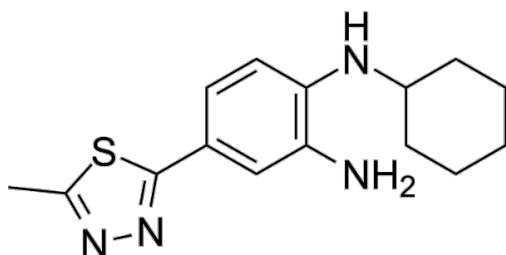
Formula $C_{15}H_{20}N_4S$ M.Wt 288.41

Solubility DMSO: ≥ 250 mg/mL (866.82 mM) 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



Background

Ferfluor-1 is a Ferroptosis inhibitor (EC₅₀ of 57 nM in HT108 cells; EC₅₀ of 75 nM in OS-RC-2 cells; EC₅₀ of 2.3 nM in SH-SY5Y neuroblastoma cells), and ratiometric photoluminescent probe with blood-brain barrier permeability. Ferfluor-1 is a specific indicator for the fluctuation of Ferroptosis. Ferfluor-1 alleviates brain disorder diseases of in vivo stroke and PD models [1].

In Vivo, Ferfluor-1 (10 mg/kg; i.v.; single administration) effectively alleviates cerebral ischemic damage in MCAO mice by inhibiting ferroptosis, as evidenced by reduced infarct volume, improved cerebral blood flow, and decreased markers of lipid peroxidation and ferroptosis [1].

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

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In Vitro, Ferfluor-1 potently inhibits ferroptosis in HT1080 fibrosarcoma cells with an EC₅₀ of 57 nM, in OS-RC-2 renal carcinoma cells with an EC₅₀ of 75 nM, and in SH-SY5Y neuroblastoma cells with an EC₅₀ of 2.3 nM^[1]. Ferfluor-1 (5 µM) does not inhibit Staurosporine -induced apoptosis in SH-SY5Y neuroblastoma cells^[1].

References:

[1]. Yan J, et al. A Druglike Ferrostatin-1 Analogue as a Ferroptosis Inhibitor and Photoluminescent Indicator. *Angew Chem Int Ed Engl.* 2025;64(20):e202502195.

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