Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Erastin

Catalog No: tcsc1675

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Specifications

CAS No:
571203-78-6

Formula:
$C_{30}H_{31}ClN_4O_4$

Pathway:
Apoptosis

Target:
Ferroptosis

Purity / Grade:
99.72%

Solubility:
DMSO : 12.5 mg/mL (22.85 mM; Need ultrasonic) H2O :

Storage Instruction:
Powder -20°C for 3 years ; 4°C for 2 years

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Observed Molecular Weight:
547.04

References

[1]. Dixon SJ, et al. Ferroptosis: an iron-dependent form of nonapoptotic cell death. Cell. 2012 May 25;149(5):1060-72. [2]. Xie Y, et al. Ferroptosis: process and function. Cell Death Differ. 2016 Mar;23(3):369-79. [3]. Huo H, et al. Erastin Disrupts Mitochondrial Permeability Transition Pore (mPTP) and Induces Apoptotic Death of Colorectal Cancer Cells. PLoS One. 2016 May 12;11(5):e0154605.

Product Description

Erastin is a **ferroptosis** activator.

In Vitro: Erastin triggers oxidative, iron-dependent cell death. Treatment of NRAS-mutant HT-1080 fibrosarcoma cells with the RSL molecule erastin (10 μM) results in a time-dependent increase in cytosolic and lipid ROS beginning at 2 hours[1]. Cell death triggered by erastin is significantly inhibited by antioxidants (e.g., α-tocopherol, butylated hydroxytoluene, and β-carotene) and iron chelators (e.g., deferoxamine), suggesting that ROS- and iron-dependent signaling is required for erastin-induced ferroptosis. Erastin can directly bind to VDAC2/3 in BJeLR cells. Knockdown of VDAC2 and VDAC3, but not VDAC1, leads to erastin resistance. Erastin has the ability to reduce glutathione level by directly inhibiting cystine/glutamate antiporter system Xc− activity, with activation of the ER stress response[2]. Erastin potently inhibits HT-29 cell survival. Erastin shows a dose-dependent effect, and 30 μM of erastin displays the most dramatic effect[3].

In Vivo: Intraperitoneal injection of erastin at well-tolerated doses dramatically inhibits HT-29 xenograft growth in severe combined immunodeficient mice[3].