Deferasirox

Cat. No.: HY-17359

CAS No.: 201530-41-8

Molecular Formula: $C_{21}H_{15}N_3O_4$

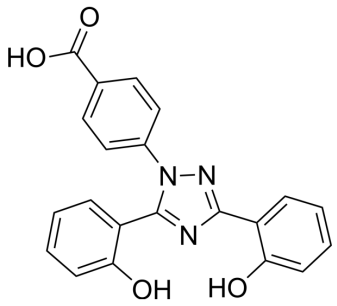
Molecular Weight: 373.36

Target: Bacterial; Ferroptosis

Pathway: Anti-infection; Apoptosis

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (267.84 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6784 mL	13.3919 mL	26.7838 mL
5 mM	0.5357 mL	2.6784 mL	5.3568 mL
10 mM	0.2678 mL	1.3392 mL	2.6784 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.70 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.70 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.70 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Deferasirox (ICL 670) is an orally available iron chelator used for the management of transfusional iron overload[1][2][3].

In Vitro

In LX-2 cells treated with 50 μM deferasirox for 12 h, α1(I)procollagen expression is decreased by 25%, with maximal reductions (10-fold) seen following 24-120 h of treatment. Similarly, α-smooth muscle actin (αSMA) expression is significantly lower[1]. Deferasirox had anti-proliferative effects on HL-60 or KG-1 myeloid leukemia cell lines at a concentration as low as 5 μM . The cytotoxicity is both dose and time dependent[2]. The viability of both EL4 cells and L1210 cells incubated with deferasirox decrease in a concentration-dependent manner[3].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	The tumor is significantly smaller in the SIO mice treated with deferasirox compared with control. Mice treated with DFX showed longer survival than the other groups. Deferasirox has a survival benefit for SIO leukemia murine model in terms of iron chelation and antileukemic therapy[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [2]	Deferasirox is dissolved in DMSO. HL-60 or KG-1 cells are treated with 0, 5, 10, 50 μM of deferasirox for 24 or 48 h, and proliferation is determined by an MTT assay[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [3]	Mice: Murine leukemia cells are injected subcutaneously into the right flank of mice. Deferasirox is dissolved in distilled water and orally administered at 20 mg/kg until the cumulative dose reaches 300 mg/kg. The mice are observed and weighed daily[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Antioxidants. 2020 Aug 14;9(8):753.
- Cells. 2019 Dec 20;9(1):31.
- Bioengineered. 2022 Mar;13(3):6627-6637.
- PLoS Negl Trop Dis. 2019 Aug 20;13(8):e0007681.
- Gene. 2022 May 21;146609.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Sobbe A, et al. Inconsistent hepatic antifibrotic effects with the iron chelator deferasirox. J Gastroenterol Hepatol. 2015 Mar;30(3):638-45.

[2]. Kim JL, et al. The oral iron chelator deferasirox induces apoptosis in myeloid leukemia cells by targetingcaspase. Acta Haematol. 2011;126(4):241-5.

[3]. Lee DH, et al. Deferasirox shows in vitro and in vivo antileukemic effects on murine leukemic cell lines regardless of iron status. Exp Hematol. 2013 Jun;41(6):539-46.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA