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Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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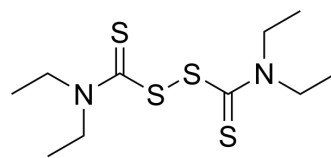
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Disulfiram (Standard)

Cat. No.:	HY-B0240R
CAS No.:	97-77-8
Molecular Formula:	C ₁₀ H ₂₀ N ₂ S ₄
Molecular Weight:	296.54
Target:	Interleukin Related; Aldehyde Dehydrogenase (ALDH); Pyroptosis; Cuproptosis; Apoptosis
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Disulfiram (Standard) is the analytical standard of Disulfiram. This product is intended for research and analytical applications. Disulfiram (Tetraethylthiuram disulfide) is a specific inhibitor of aldehyde-dehydrogenase (ALDH1), used for the treatment of chronic alcoholism by producing an acute sensitivity to alcohol. Disulfiram inhibits gasdermin D (GSDMD) pore formation in liposomes and inflammasome-mediated pyroptosis and IL-1 β secretion in human and mouse cells. Disulfiram + Cu²⁺ increases intracellular ROS levels triggering apoptosis of ovarian cancer stem cells^[1-6].

REFERENCES

- [1]. Chen D, et al. Disulfiram, a clinically used anti-alcoholism drug and copper-binding agent, induces apoptotic cell death in breast cancer cultures and xenografts via inhibition of the proteasome activity. *Cancer Res.* 2006 Nov 1;66(21):10425-33.
- [2]. Wang W, et al. Disulfiram-mediated inhibition of NF-kappaB activity enhances cytotoxicity of 5-fluorouracil in human colorectal cancer cell lines. *Int J Cancer.* 2003 Apr 20;104(4):504-11.
- [3]. Cen D, et al. Disulfiram facilitates intracellular Cu uptake and induces apoptosis in human melanoma cells. *J Med Chem.* 2004 Dec 30;47(27):6914-20.
- [4]. Brar SS, et al. Disulfiram inhibits activating transcription factor/cyclic AMP-responsive element binding protein and human melanoma growth in a metal-dependent manner in vitro, in mice and in a patient with metastatic disease. *Mol Cancer Ther.* 2004 Sep;3
- [5]. Jun Jacob Hu, et al. Identification of pyroptosis inhibitors that target a reactive cysteine in gasdermin D. *The Preprint Server For Biology*, 2018, Jul. 10.
- [6]. Guo F, et al. Inhibitory effect on ovarian cancer ALDH+ stem-like cells by Disulfiram and Copper treatment through ALDH and ROS modulation. *Biomed Pharmacother.* 2019 Oct;118:109371.

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

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