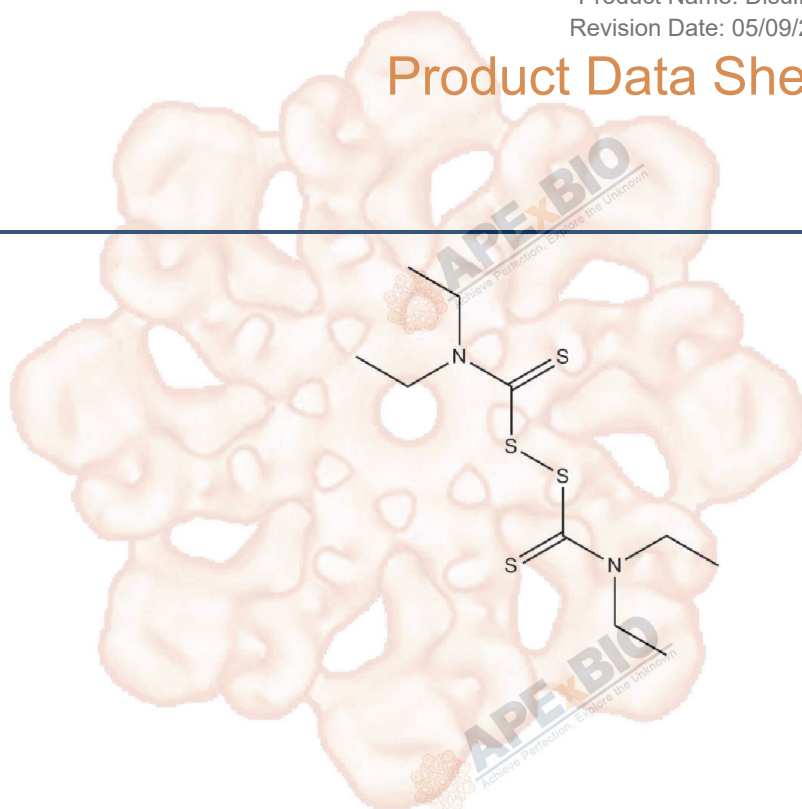


Product Data Sheet

Disulfiram

Cat. No.:	A4015
CAS No.:	97-77-8
Formula:	C ₁₀ H ₂₀ N ₂ S ₄
M.Wt:	296.54
Synonyms:	
Target:	Metabolism
Pathway:	Dopamine β -hydroxylase
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥ 12 mg/mL in DMSO; ≥ 24.2 mg/mL in EtOH with ultrasonic

In Vitro

	Solvent	Mass Concentration	1mg	5mg	10mg
Preparing Stock Solutions		1 mM	3.3722 mL	16.8611 mL	33.7223 mL
		5 mM	0.6744 mL	3.3722 mL	6.7445 mL
		10 mM	0.3372 mL	1.6861 mL	3.3722 mL

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

Biological Activity

Shortsummary

Dopamine β -hydroxylase inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line: MDA-MB-231 cells

Preparation method: The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions: 5 ~ 20 μ M; 24 hrs

In Vivo	Applications:	The Disulfiram-copper complex potentially inhibited the proteasomal activity in cultured breast cancer MDA-MB-231 cells, before induction of apoptotic cancer cell death.
	Animal experiment	
	Animal models:	Mice bearing MDA-MB-231 tumor xenografts
	Dosage form:	50 mg/kg/d; p.o.; 29 days
	Applications:	In mice bearing MDA-MB-231 tumor xenografts, Disulfiram significantly inhibited tumor growth (by 74%), associated with in vivo proteasome inhibition and apoptosis induction.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Chen D, Cui QC, Yang H, Dou QP. 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.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX-BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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