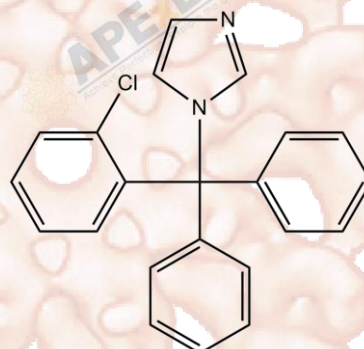


# Product Data Sheet

## Clotrimazole

<b>Cat. No.:</b>	A8401
<b>CAS No.:</b>	23593-75-1
<b>Formula:</b>	C <sub>22</sub> H <sub>17</sub> ClN <sub>2</sub>
<b>M.Wt:</b>	344.84
<b>Synonyms:</b>	
<b>Target:</b>	Microbiology & Virology
<b>Pathway:</b>	Antibiotic
<b>Storage:</b>	Store at -20°C



## Solvent & Solubility

insoluble in H<sub>2</sub>O; ≥15.1 mg/mL in EtOH; ≥28.1 mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Solvent	Mass		
		1mg	5mg	10mg
	<b>Concentration</b>			
	<b>1 mM</b>	2.8999 mL	14.4995 mL	28.9990 mL
	<b>5 mM</b>	0.5800 mL	2.8999 mL	5.7998 mL
	<b>10 mM</b>	0.2900 mL	1.4499 mL	2.8999 mL

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

## Biological Activity

Shortsummary

antifungal compound

IC<sub>50</sub> & Target

In Vitro

### Cell Viability Assay

Cell Line:	MCF10A, MCF-7 and MDA-MB-231 human breast cancer cell lines
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:	50 μM; 24 h

	Applications:	In MCF10A, MCF-7 and MDA-MB-231 cells, Clotrimazole inhibited migration of MCF-7 and MDA-MB-231 cells by 32±5% and 59±6%, respectively, but had no effect on MCF10A cells. Clotrimazole inhibited mobility of MDA-MB-231 cells and MCF-7 cells. Also, clotrimazole reduced the viability of breast cancer cells.
In Vivo	<b>Animal experiment</b>	
	Animal models:	CAL27 xenograft mice model
	Dosage form:	150 mg/kg/body; 6 times a week for two weeks; intraperitoneally (i.p.)
	Applications:	In CAL27 xenograft mice model, clotrimazole significantly decreased the tumor volume of CAL27 cell xenograft in nude mice by 57.9%. Compared with control mice, the mean weights of the excised tumors were approximately 53.6% lower in clotrimazole-treated mice. Clotrimazole increased the number of apoptotic tumor cells.
	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

1. Coyle JP, Rinaldi RJ, et al. "Reduced oxygen tension culturing conditionally alters toxicogenic response of differentiated H9c2 cardiomyoblasts to acrolein." Toxicol Mech Methods. 2018 Mar 22:1-39.PMID:29564938
2. Raymond D, Harbison, Ph.D, et al. "The Influence of Oxygen Tension and Glycolytic and Citric Acid Cycle Substrates in Acrolein-induced Cellular Injury in the Differentiated H9c2 Cardiac Cell Model." University of South Florida. 2016 Nov.

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## References

- [1]. Furtado CM1, Marcondes MC, Sola-Penna M, et al. Clotrimazole preferentially inhibits human breast cancer cell proliferation, viability and glycolysis. PLoS One. 2012;7(2):e30462.
- [2]. Wang J1, Jia L1, Kuang Z1, et al. The in vitro and in vivo antitumor effects of clotrimazole on oral squamous cell carcinoma. PLoS One. 2014 Jun 3;9(6):e98885.

## 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.



**APExBIO Technology**

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