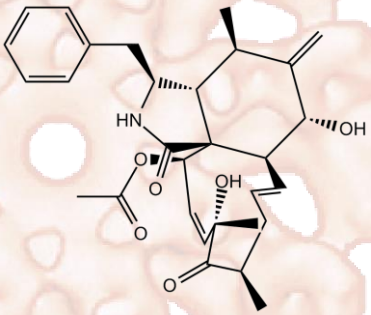
Product Data Sheet

Cytochalasin D



Cat. No.:	B6645
CAS No.:	22144-77-0
Formula:	C30H37NO6
M.Wt:	507.63
Synonyms:	
Target:	Others
Pathway:	Actin
Storage:	Desiccate at -20°C

Solvent & Solubility

In Vitro

Soluble in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	1.9699 mL	9.8497 mL	19.6994 mL
5 mM	0.3940 mL	1.9699 mL	3.9399 mL
10 mM	0.1970 mL	0.9850 mL	1.9699 mL

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

Biological Activity

Shortsummary	inhibitor of actin polymerization, selective
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	HeLa, Vero, L, HEp2, and MDBK cells, SC-1 cells, Murine CT26 colorectal carcinoma 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:	0.2–0.5 μg/ml

	Applications:	In HeLa, Vero, L, HEp2, and MDBK cells, cytochalasin D (0.2–0.5 μg/ml) induced sustained contraction (contracture), loss of microvilli, expression of endoplasmic contents (zeiosis), nuclear protrusion, and extension of cytoplasmic processes. Cells in G1 were most sensitive to CD; responsiveness decreased progressively during early S and is least in mid S through G2. CD inhibited transport of [14C]deoxyglucose in HeLa. In SC-1 cells, Cytochalasin D treatment severely disrupted network organization, increased the number of actin filament ends, and led to the formation of filamentous aggregates or foci composed mainly of actin filaments. Cytochalasin D (0.24~15 μg/mL, 16 h) inhibited CT26 tumor cell proliferation in time and dose dependent manner and induced significant CT26 cell apoptosis.
In Vivo	**Animal experiment**	
	Animal models:	Murine CT26 tumor model, porcine coronary model
	Dosage form:	Intravenous injection, 50 mg/kg, every 3 days for 21 days
	Applications:	Cytochalasin D (i.v., 50 mg/kg) in vivo treatment significantly inhibited tumor growth and prolonged the survival times in CT26 tumor-bearing mice. In porcine coronary model, Cytochalasin D (2 μg) resulted in less late lumen loss in low-dose. High-dose Cytochalasin D (20 μg) inhibited both late lumen loss and intimal area.
	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. Gao W, Ye G, et al. "Transferrin receptor-targetedpH-sensitive micellar system for diminution of drug resistance and targetabledelivery in multidrug-resistant breast cancer." Int J Nanomedicine. 2017 Feb7;12:1047-1064.PMID:28223798

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References

[1]. Miranda A F, Godman G C, Deitch A D, et al. Action of cytochalasin D on cells of established lines[J]. The Journal of cell biology, 1974, 61(2): 481-500.

[2]. Schliwa M. Action of cytochalasin D on cytoskeletal networks[J]. The Journal of cell biology, 1982, 92(1): 79-91.

[3]. Huang F Y, Li Y N, Mei W L, et al. Cytochalasin D, a tropical fungal metabolite, inhibits CT26 tumor growth and angiogenesis[J]. Asian Pacific journal of tropical medicine, 2012, 5(3): 169-174.

[4].Salu K J, Bosmans J M, Huang Y, et al. Effects of cytochalasin D-eluting stents on intimal hyperplasia in a porcine coronary artery model[J]. Cardiovascular research, 2006, 69(2): 536-544.

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 APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm 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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