



Cytochalasin B

Data Sheet

Catalog Number:	MC11102	Product Type:	Small Molecule
Bio-Activity:	Actin filament disrupting agent	CAS #:	14930-96-2
Research Categories:	Cell death, vesicles, angiogenesis, cancer	Chemical Name:	Fermentation product from <i>Drechslera dematioidea</i>
Solubility:	Soluble in DMSO (up to 5 mg/ml) or in Ethanol (up to 10 mg/ml).	Molecular Formula:	C ₂₉ H ₃₇ NO ₅
Purity:	> 98%	Molecular Weight:	479.6
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

A cell permeable fungal toxin which binds to the barbed end of actin, inhibiting its polymerization [1]. Inhibits cell division, migration and glucose transport [2]. Causes cell cycle arrest at G₂/M and induces apoptosis in HCT-116 colorectal carcinoma cells [3]. Cytochalasin B-induced membrane vesicles (CIMVs) retain cell surface receptors of the parent cells and retain fusion specificity with target cells [4]. CIMVs are a promising new vector system for drug and biomolecule delivery due to their natural origin and participation in intercellular communication [5].

References:

- 1) PA Theodoropoulos et al. Biochem. Pharmacol. 1994 47:1875
- 2) RR Whitesell et al. Biochem. J. 2005 386:245
- 3) RJ Buldak et al. Eur. J. Histochem. 2014 58:2408
- 4) MO Gomzikova et al. Biomed. Res. Int. 2018 2018:7053623 (eCollection 2018)
- 5) MO Gomzikova et al. Oncotarget 2017 8:70496"5) Kalousec et al. (2007) Actinomycin D upregulates proapoptotic protein Puma and downregulates Bcl-2 mRNA in normal peripheral blood lymphocytes; Anticancer Drugs, 18 763

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