



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

### FOR RESEARCH USE ONLY

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