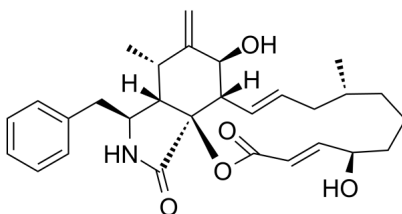


## Certificate of Analysis

Catalog Number	BP22550
Product Name	Cytochalasin B

## Physical and Chemical Properties

CAS No.	14930-96-2
Chemical Formula	C <sub>29</sub> H <sub>37</sub> NO <sub>5</sub>
Molecular Weight	479.61
Solubility	DMSO: 83.33 mg/mL (173.75 mM, Need ultrasonic and warming and heat to 60°C) Ethanol: 25 mg/mL (52.13 mM, Need ultrasonic)
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

## Product Information

Description	Cytochalasin B is a cell-permeable mycotoxin binding to the barbed end of actin filaments, disrupting the formation of actin polymers, with K <sub>d</sub> value of 1.4-2.2 nM for F-actin.
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In vitro	<p>Cytochalasin B is a cell-permeable mycotoxin binding to the barbed end of actin filaments, inhibits the elongation and shortening of actin filaments, with Kds of 2.2 nM and 1.4 nM for F-actin in the presence of MgCl<sub>2</sub> (2 mM) or MgCl<sub>2</sub> (2 mM) plus KCl, respectively. Cytochalasin B (0.1-10 μM) shows inhibitory effect on multiple murine cancer cell lines, with IC<sub>50</sub>s of 2.56 μM (M109c), 10.46 μM (B16BL6), 105.5 μM (P388/ADR), 51.9 μM (P388/S) and IC<sub>80</sub>s of 12.23 μM (M109c), 44.86 μM (B16BL6), 188.4 μM (P388/ADR), 84.1 μM (P388/S) after treatment for 3 h, with IC<sub>50</sub>s of 0.25 μM (M109c), 0.37 μM (B16F10), 0.87 μM (B16BL6), and IC<sub>80</sub>s of 0.75 μM (M109c), 1.21 μM (B16F10), 10.41 μM (B16BL6) after treatment for 4 days. Cytochalasin B (6 μM) increases the myofibrillar fragmentation index (MFI), which is attributed to the intensely breaking of myofibrillar proteins into short segments. Cytochalasin B also accelerates the disruption of actin filaments. In addition, Cytochalasin B accelerates the transformation from F-actin to G-actin, lowering the content of F-actin and significantly increasing G-actin bands during postmortem conditioning.</p>
In vivo	<p>Cytochalasin B (10, 25, 50 mg/kg, i.p.) dose-dependently increases the life expectancy of Balb/c mice bearing with P388/ADR leukemias. Cytochalasin B at 50 mg/kg produces 10 % long-term survival in the multidrug resistant P388/ADR cohort, and 40 % long-term survival in the drug sensitive P388/S cohort.</p>

## Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	<p>Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.</p>

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