

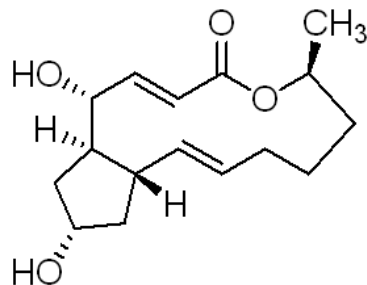
Product Information

Brefeldin A Ready Made Solution from *Penicillium brefeldianum*

Catalog Number **B5936**
Storage Temperature 2–8 °C

CAS RN 20350-15-6

Synonyms: BFA; ascotoxin; cyanein; decumbin;
 γ ,4-Dihydroxy-2-[6-hydroxy-1-heptenyl]-
4-cyclopentanecrotonic acid λ -lactone



Product Description

Molecular Formula: $C_{16}H_{24}O_4$
Molecular Weight: 280.36

Brefeldin A (BFA) is a fungal macrocyclic lactone synthesized from palmitate (C_{16}) by a variety of fungi.¹ It is known to inhibit protein secretion in mammalian and other eukaryotic cells by interfering with the function of the Golgi apparatus.² This effect is generally accompanied by distinct morphological changes.¹ Brefeldin A also inhibits export from distal Golgi compartments to the cell surface.²

The effects of BFA are related to its ability to inhibit binding of regulatory coat proteins to their target organelles, resulting in dysregulation of membrane traffic.¹ Brefeldin A has been shown to induce apoptosis in human tumors, and to block secretion, vesicular assembly, antigen presentation, transcytosis and endocytosis, viral assembly, toxin transport, and budding. It has been also identified as an activator of the sphingomyelin signal transduction cycle.¹⁻⁵ Brefeldin A may be used as a specific inhibitor of membrane transport and in studies addressing questions related to class I antigen presentation, toxic transport, ER degradation, and the localization of glycosaminoglycan elongation and sulfation reactions.¹

Reagent

Brefeldin A Ready Made Solution is supplied as a 10 mg/ml 0.2 μ m-filtered solution in dimethyl sulfoxide (DMSO).

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store sealed at 2–8 °C. Under these conditions the product is stable for 2 years.

References

1. Klausner, R.D., et al., Brefeldin A: Insights into the control of membrane traffic and organelle structure. *J. Cell. Biol.*, **116**, 1071-1080 (1992).
2. Miller, S.G., et al., Post-Golgi membrane traffic: Brefeldin A inhibits export from distal Golgi compartments to the cell surface but not recycling. *J. Biol. Chem.*, **118**, 267-283 (1992).
3. Strous, G.J., et al., Differential effects of brefeldin A on transport of secretory and lysosomal proteins. *J. Biol. Chem.*, **268**, 2341-2347 (1993).
4. Guo, H., et al., Brefeldin A-mediated apoptosis requires the activation of caspases and is inhibited by Bcl-2. *Exp. Cell Res.*, **245**, 57-68 (1998).
5. Linardic, C.M., et al., Activation of the sphingomyelin cycle by brefeldin A: effects of brefeldin A on differentiation and implications for a role for ceramide in regulation of protein trafficking. *Cell Growth Differ.*, **7**, 765-774 (1996).

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