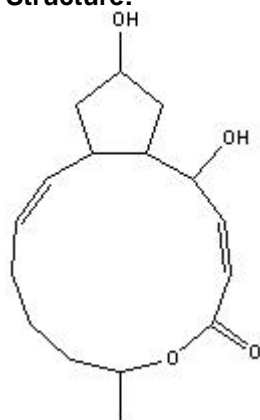


## TECHNICAL INFORMATION

Catalog Number: 159027, 194802

### Brefeldin A

#### Structure:



**Molecular Formula:** C<sub>16</sub>H<sub>24</sub>O<sub>4</sub>

**Molecular Weight:** 280.37

**CAS # :** 20350-15-6

**Synonyms:** g,4-Dihydroxy-2[6-hydroxy-1-heptenyl]-4-cyclopentanecrotonic acid l-lactone; BFA; 1,6,7,8,9,11a,12,13,14,14a-Decahydro-1,13-dihydroxy-6-methyl-4H-cyclopent[f]oxacyclotridecin-4-one; Ascotoxin; Cyanein; Decumbin

**Physical Description:** White to off-white crystalline powder

**Solubility:** Soluble in chloride, methylene, ethanol (5 mg/ml-clear, colorless solution), methanol (5 mg/ml - clear, colorless solution), or DMSO (20 mg/ml). Store solutions aliquoted at -20°C for approximately 2 to 3 months.

**Description:** A fungal metabolite which is a macrocyclic lactone exhibiting a wide range of antibiotic activity.<sup>1</sup> Produced by *Penicillium brefeldianum*.<sup>1</sup> Blocks binding of the cytosolic coat protein b-COP and ARF to Golgi membranes mediated by protein G. Also blocks protein transportation into post-Golgi compartments. It activates the sphingomyelin cycle. Brefeldin A mediated apoptosis has been observed in human tumor cells.

#### Availability:

Catalog Number	Description	Size
159027	Brefeldin A	5 mg 25 mg
194802	Brefeldin A, molecular biology reagent	5 mg 10 mg

#### References:

- Merck Index, 12th Ed., No. 1393.
- Dinter, A. and Berger, E.G., "Golgi-disturbing agents." *Histochem. Cell. Biol.*, v. **109**, 571-590 (1998).
- Donaldson, J.G., et al., *Science*, v. **254**, 1197 (1991).
- Donaldson, J.G., et al., *J. Cell. Biol.*, v. **112**, 579 (1991).
- Fujiwara, T., et al., *J. Biol. Chem.*, v. **263**, 18545 (1988).
- Guo, H., et al., "Brefeldin A-mediated apoptosis requires the activation of caspases and is inhibited by Bcl-2." *Exp. Cell Res.*, v. **245**, 57-68 (1998).
- Harri, E., et al., *Helv. Chim. Acta*, v. **46**, 1235 (1963).
- Hudson, T.H., et al., *J. Biol. Chem.*, v. **266**, 18586 (1991).
- Hunziker, W., Whitney, J.A., Mellman, I., *FEBS Lett.*, v. **307**, 93 (1992).
- Klausner, R.D., Donaldson, J.G., Lippincott-Schwartz, J., *J. Cell Biol.*, v. **116**, 1071 (1992).
- Linaudic, 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.*, v. **7**, 765-774 (1996).
- Lippincott-Schwartz, J., et al., *Cell*, v. **60**, 821 (1990).
- Misumi, T., et al., *J. Biol. Chem.*, v. **261**, 11398 (1986).
- Orci, L., et al., *Cell*, v. **64**, 1183 (1991).
- Shao, R.G., et al., "Brefeldin A is a potent inducer of apoptosis in human cancer cells independently of p53." *Exp. Cell Res.*, v.

**227**, 190-196 (1996).

– Singleton, V.L., Bohonos, M., Ullstrup, A.J., *Nature*, v. **181**, 1072 (1958).