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Store at -20C  
#9972

## Brefeldin A

5 mg

**For Research Use Only. Not for Use in Diagnostic Procedures.**

### Background

Brefeldin A (BFA) is a fungal metabolite demonstrated to reversibly interfere with anterograde transport from the endoplasmic reticulum to the Golgi apparatus (1,2). While initially isolated as an antibiotic (3), and does have a wide range of antibiotic activity, it is primarily used as a biological research tool for studying protein transport. Treatment leads to a rapid accumulation of proteins within the ER and collapse of the Golgi stacks. Treatment with BFA can also inhibit protein secretion (4) and prolonged exposure can induce apoptosis (5). The main target of BFA appears to be ADP-ribosylation factor (ARF), which is responsible for association of coat protein to the Golgi membrane (6,7).

### Molecular Formula

C<sub>16</sub>H<sub>24</sub>O<sub>4</sub>

### Molecular Weight

280.36 g/mol

### Purity

>99%

### CAS

20350-15-6

### Solubility

Soluble in DMSO at 100mg/ml and EtOH at 25mg/ml.

### Storage

Store lyophilized or in solution at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

### Directions for Use

Brefeldin A is supplied as a 5 mg powder. Store at -20°C. Brefeldin A is soluble in DMSO (also ethanol and methanol) and stock solutions (typically 10 mg/ml) should be stored at -20°C. Working concentrations and length of treatment can vary depending on desired effect. Inhibition of ER to Golgi trafficking was observed as low as 100 ng/ml and apoptosis was observed with prolonged treatment at 10 µg/ml.

### Background References

1. Klausner, R.D. et al. (1992) *J Cell Biol* 116, 1071-80.
2. Pelham, H.R. (1991) *Cell* 67, 449-51.
3. Tamura, G. et al. (1968) *J Antibiot (Tokyo)* 21, 160-1.
4. Misumi, Y. et al. (1986) *J Biol Chem* 261, 11398-403.
5. Shao, R.G. et al. (1996) *Exp Cell Res* 227, 190-6.
6. Helms, J.B. and Rothman, J.E. (1992) *Nature* 360, 352-4.
7. Randazzo, P.A. et al. (1993) *J Biol Chem* 268, 9555-63.

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