

#9972 Store at -20°C

Brefeldin A

5 mg



Cell Signaling
TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

C₁₆H₂₄O₄

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.

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.
All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or

therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.