Hello Bio, Inc. 304 Wall St., Princeton, NJ 08540 USA

T. 609-683-7500 F. 609-228-4994

customercare-usa@hellobio.com



DATASHEET

Brefeldin A (BFA)

Product overview

Name Brefeldin A (BFA)

Cat No HB2949

Alternative names BFA, Synergisidin, Nectrolide, Decumbin, Cyanein

Biological action Inhibitor Purity >98%

DescriptionReversible protein transport inhibitor. Commonly used in cytokine staining. Enhances CRISPR-

mediated HDR.

Biological Data

Biological description

Brefeldin A is a reversible inhibitor of protein transport.

Following treatment with Brefeldin A, the Golgi complex disassembles and redistributes into the endoplasmic reticulum within minutes. Brefeldin A is a potent, rapid and reversible inhibitor of secretion.

Brefeldin A inhibits the GTPase exchange factor acting on the ARF protein. ARF activates ADP-ribosylation factors to the golgi complex.

Uses

Brefeldin A is widely used in studies of membrane trafficking. It increases intracellular cytokine staining signals and is commonly used for intracellular staining of cytokines for flow cytometry. It blocks transport processes during cell activation and causes an accumulation of cytokines at the golgi complex/ endoplasmic reticulum.

Brefeldin A also shows antibiotic actions and induces apoptosis and autophagy in mammalian cells. Recently, it has been shown to enhance CRISPR-mediated homology-directed repair (HDR) in hiPSCs (human induced pluripotent stem cells).

Monensin sodium salt also available

Solubility & Handling

Solubility overview Storage instructions Storage of solutions

Shipping Conditions

Important

Soluble in DMSO (50mM) and in ethanol (10mM)

-20°C (desiccate)

Prepare and use solutions on the same day if possible. Store solutions at -20 °C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use

Chemical Data

Chemical name

1,6,7,8,9,11a $\beta,12,13,14,14$ aa-Decahydro- $1\beta,13$ a-dihydroxy- 6β -methyl-4H-cyclopent(f)oxacyclotridecin-4-one

Molecular Weight 280.36

Chemical structure

но...

 $\textbf{SMILES} \hspace{1cm} [H][C@]1(C)CCC\C=C\C2C[C@H](O)C[C@H]2[C@H](O)\C=C\C(=O)O1$

InChi InChi=1S/C16H24O4/c1-11-5-3-2-4-6-12-9-13(17)10-14(12)15(18)7-8-16(19)20-11/h4,6-8,11-15,17-

18H,2-3,5,9-10H2,1H3/b6-4+,8-7+/t11-,12?,13-,14+,15+/m0/s1

InChiKey KQNZDYYTLMIZCT-KFKPYADVSA-N

MDL numberMFCD12913297AppearanceWhite to off-white solid

References

Brefeldin A: the advantage of being uncompetitive.

Chardin and McCormick (1999) Cell 97(2) **PubMedID**10219235

Golgi tubule traffic and the effects of brefeldin A visualized in living cells.

Sciaky et al (1997) J Cell Biol 39(5)

PubMedID 9382862

Small molecules enhance CRISPR genome editing in pluripotent stem cells.

Yu et al (2015) Cell Stem Cell 16(2)

PubMedID 25658371

Detection of intracellular cytokines by flow cytometry.

Jung et al (1993) J Immunol Methods. 159(1-2) **PubMedID** 8445253

Molecular mechanism and functional role of brefeldin A-mediated ADP-ribosylation of CtBP1/BARS.

Colanzi et al (2013) Proc Natl Acad Sci U S A 110(24)

PubMedID 23716697