

#54645 Store at -20°C

Bafilomycin A1

100 µg



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Background

Isolated from *Streptomyces griseus*, bafilomycin A1 is a macrolide antibiotic that reversibly inhibits late phase autophagy (1,2). By inhibiting H⁺-ATPase, bafilomycin A1 prevents re-acidification of synaptic vesicles following exocytosis and thereby blocks fusion of autophagosomes and lysosomes (2-5). Research studies demonstrate that bafilomycin A1 can also inhibit cell proliferation (4).

Molecular Formula

C₃₅H₅₈O₉

Molecular Weight

622.8 g/mol

Purity

>98%

CAS

88899-55-2

Solubility

Soluble in DMSO at 50mg/ml.

Storage

Store lyophilized or in solution at -20°C, desiccated. Protect from light. 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:

Bafilomycin A1 is supplied as a lyophilized powder. For a 1 mM stock, reconstitute the 100 µg in 160.56 µl DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used at 10 nM-1 µM for up to 18 hr.

Background References

1. Werner, G. et al. (1984) *J Antibiot (Tokyo)* 37, 110-7.
2. Yoshimori, T. et al. (1991) *J Biol Chem* 266, 17707-12.
3. Bowman, E.J. et al. (1988) *Proc Natl Acad Sci U S A* 85, 7972-6.
4. Ohkuma, S. et al. (1993) *In Vitro Cell Dev Biol Anim* 29A, 862-6.
5. Yamamoto, A. et al. (1998) *Cell Struct Funct* 23, 33-42.

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

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