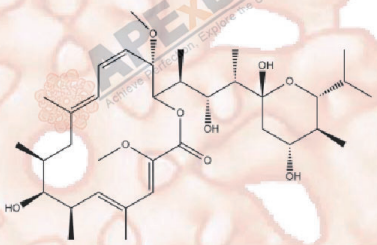
Product Data Sheet

Bafilomycin A1



Cat. No.:	A8627
CAS No.:	88899-55-2
Formula:	C35H58O9
M.Wt:	622.84
Synonyms:	
Target:	Ubiquitination/ Proteasome
Pathway:	Autophagy
Storage:	Desiccate at -20°C

Solvent & Solubility

In Vitro

Soluble in DMSO

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1mg	5mg	10mg
1 mM	1.6055 mL	8.0277 mL	16.0555 mL
5 mM	0.3211 mL	1.6055 mL	3.2111 mL
10 mM	0.1606 mL	0.8028 mL	1.6055 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	V-ATPase inhibitor,selective and reversible
IC_{50} & Target	4-400 nM (V-ATPases)

In Vitro

Cell Viability Assay

Cell Line:	HeLa cells
Preparation method：	The solubility of this compound in DMSO is > 10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months.
Reacting conditions:	0 ~ 20 nM
Applications:	Bafilomycin A1 dose-dependently inhibited the vacuolization of Hela cells

		induced by H. pylori, showing a 50% effect at 4 nM and a complete inhibition at 12.5 nM. In addition, Bafilomycin A1 also efficiently restored vacuolated cells to a normal appearance.
In Vivo	**Animal experiment**	
	Animal models:	Young freshwater tilapias
	Dosage form:	0 ~ 10-5 mol/L; 30 mins
	Applications:	In young tilapias, Bafilomycin A1 dose-dependently inhibited the rate of Na+ uptake with a Ki value of 1.6 × 10-7 mol/L. The inhibitory effect (20%) was observed at a concentration as low as 10-8 mol/L and increased linearly up to a concentration of 10-6 mol/L, after which it remained at approximately 90 % inhibition.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

1. Xinchun Li, Li Zhong, et al. "Phosphorylation of IRS4 by CK1γ2 promotes its degradation by CHIP through the ubiquitin/lysosome pathway" Theranostics, 2018, Vol. 8, Issue13.
2. Wang H, Liu W, et al. "Inhibitor analysis revealed that clathrin-mediated endocytosis is involed in cellular entry of type III grasscarp reovirus." Virol J. 2018 May 24;15(1):92.PMID:29793525
3. Boyd Tressler, Andrea Michelle. "Mechanisms of Extracellular Nucleotide Accumulation During Regulated Cell Death in Tumor Cells."rave.ohiolink.edu,May 2016.
4. Liu, Shuangxin, et al. "Bovine parathyroid hormone enhances osteoclast bone resorption by modulating V-ATPase through PTH1R." International journal of molecular medicine (2015).PMID:26647715
5. Boyd-Tressler, Andrea, et al. "Chemotherapeutic Drugs Induce ATP Release via Caspase-gated Pannexin-1 Channels and a Caspase/Pannexin-1-Independent Mechanism." Journal of Biological Chemistry (2014): jbc-M114.PMID:25112874

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References

[1]. Papini E, Bugnoli M, De Bernard M, Figura N, Rappuoli R, Montecucco C. Bafilomycin A1 inhibits Helicobacter pylori-induced vacuolization of HeLa cells. Mol Microbiol. 1993 Jan;7(2):323-7.
[2]. Fenwick JC, Wendelaar Bonga SE, Flik G. In vivo bafilomycin-sensitive Na(+) uptake in young freshwater fish. J Exp Biol. 1999 Dec;202 Pt 24:3659-66.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage

temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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