

# PRODUCT INFORMATION



## Bafilomycin D

Item No. 19438

CAS Registry No.: 98813-13-9

Formal Name: (3Z,5E,7R,8S,9S,11E,13E,15S,16R)-16-  
[(1S,2R,3S,5E,7S,8R)-2,8-dihydroxy-  
1,3,7,9-tetramethyl-4-oxo-5-decen-1-  
yl]-8-hydroxy-3,15-dimethoxy-5,7,9,11-  
tetramethyl-oxacyclohexadeca-3,5,11,13-  
tetraen-2-one

MF:  $C_{35}H_{56}O_8$

FW: 604.8

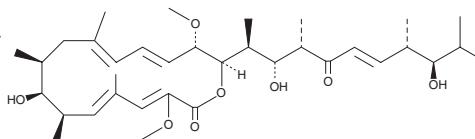
Purity:  $\geq 98\%$

Supplied as: A solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years

Item Origin: Bacterium/*Streptomyces* sp.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Bafilomycin D is supplied as a solid. A stock solution may be made by dissolving the bafilomycin D in the solvent of choice, which should be purged with an inert gas. Bafilomycin D is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

Bafilomycin D is a bacterial metabolite that has been found in *Streptomyces* and has diverse biological activities.<sup>1-3</sup> It is an inhibitor of vacuolar  $\text{H}^+$ -ATPases (V-ATPases;  $K_i = 20$  nM in *N. crassa* vacuolar membranes) and is selective for V-ATPases over P-type ATPases ( $K_i = 20,000$  nM for the *E. coli* enzyme).<sup>2</sup> Bafilomycin D induces autophagosome accumulation in MCF-7 cells when used at concentrations ranging from 10 to 1,000 nM.<sup>1</sup> It reduces viral genome copy numbers in the culture supernatant of Vero E6 cells infected with H1N1 influenza A.<sup>3</sup>

### References

1. Carr, G., Williams, D.E., Díaz-Marrero, A.R., *et al.* Bafilomycins produced in culture by *Streptomyces* spp. isolated from marine habitats are potent inhibitors of autophagy. *J. Nat. Prod.* **73**(3), 422-427 (2010).
2. Dröse, S., Bindseil, K.U., Bowman, E.J., *et al.* Inhibitory effect of modified bafilomycins and concanamycins on P- and V-type adenosinetriphosphatases. *Biochemistry* **32**(15), 3902-3906 (1993).
3. Xie, X., Lu, S., Pan, X., *et al.* Antiviral bafilomycins from a feces-inhabiting *Streptomyces* sp. *J. Nat. Prod.* **84**(2), 537-543 (2021).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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