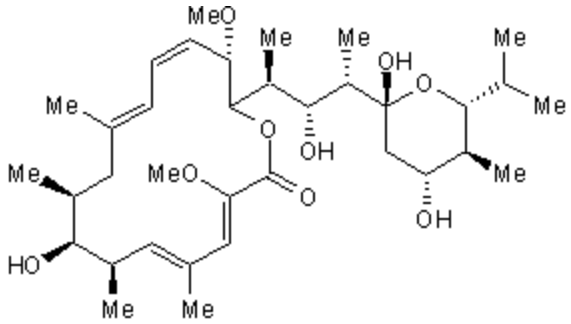
Bafilomycin A1

Cat. No. 1334



Chemical Name: (3*Z*,5*E*,7*R*,8*S*,9*S*,11*E*,13*E*,15*S*,16*R*)-8-Hydroxy-16-[(1*S*,2*R*,3*S*)-2-hydroxy-1-methyl-3-[(2*R*,4*R*,5*S*,6*R*)-tetrahydro-2,4-dihydroxy-5-methyl-6-(1-methylethyl)-2*H*-pyran-2-yl]butyl]-3,15-dimethoxy-5,7,9,11-tetramethyloxacyclohexadeca-3,5,11,13-tetraen-2-one

Biological Activity

Highly potent, selective inhibitor of vacuolar H^+-ATPases (IC_{50} = 0.6 - 1.5 nM in bovine chromaffin granules). Selective for v-ATPase over other ATP hydrolyzing enzymes such as F-ATPases and the H^+/K^+-ATPase (P-ATPase). Thought to inhibit autophagy either by blocking autophagosome-lysosome fusion (in H4IIE cells), or by blocking lysosomal degradation.

Technical Data

M.Wt:
622.84

Formula:
$C_{35}H_{58}O_9$

Solubility:
Soluble in DMSO

Purity:
>98 %

Storage:
Desiccate at -20°C

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CAS No:
88899-55-2

The technical data provided above is for guidance only.
For batch specific data refer to the Certificate of Analysis.

References

Yamamoto *et al* (1998) Bafilomycin A1 prevents maturation of autophagic vacuoles by inhibiting fusion between autophagosomes and lysosomes in rat hepatoma cell line, H-4-II-E cells. Cell Struct.Funct. ***23*** 33. PMID: 9639028.

Gagliardi *et al* (1999) Chemistry and stucture activity relationships of bafilomycin A_1, a potent and selective inhibitor of the vacuolar H^+-ATPase. Curr.Med.Chem. ***6*** 1197. PMID: 10519916.

Fass *et al* (2006) Microtubules support production of starvation-induced autophagosomes but not their targeting and fusion with lysosomes. J.Biol.Chem. ***281*** 36303. PMID: 16963441.

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