For Research Use Only

Ciliobrevin A

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Catalog Number: CM04447

产品信息

Catalog Number:
CM04447

CAS号:
302803-72-1

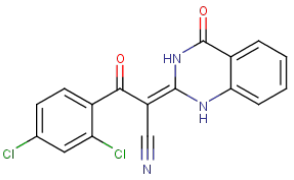
分子式:
$C_{17}H_9Cl_2N_3O_2$

主要靶点:
Hedgehog/Smoothened

主要通路:
G蛋白偶联受体|干细胞

分子量:
358.18

溶解度:
DMSO:70 mg/mL (195.43 mM),Ethanol:1 mg/mL (2.79 mM)



靶点活性

Hh:>10 μM.

体外活性

Shh-EGFPFLAG-Gli2 cells cultured with Ciliobrevin A have truncated primary cilia, and this cellular organelle is absent in a significant fraction of Ciliobrevin A-treated cells. Ciliobrevin A perturbs primary cilia formation in the Shh-LIGHT2FLAG-Gli1 cells and promotes accumulation of FLAG-Gli1 at the distal tip of this organelle. Ciliobrevin A significantly inhibits the proliferation of these neuronal progenitors, as measured by histone H3 phosphorylation (pH3) levels, and reduces cellular levels of cyclin D1 protein and Gli1, Gli2, and N-Myc transcripts in the CGNPs. Ciliobrevin A can block the proliferation of SmoM2-expressing CGNPs and should be equally potent against CGNPs lacking Su(fu) function, whereas the Smo inhibitor Cyclopamine is ineffective against either oncogenic lesion. Ciliobrevin A prevents an increase in the FLAG-Gli2 full-length/repressor ratio upon Shh stimulation, but HPI-2 and HPI-3 have no significant effect. Ciliobrevin A increases ciliary levels of FLAG-Gli2 in a manner disproportionate to their effects on total FLAG-Gli2 levels[1].

细胞实验

Using MTS-8 assay to measure cell proliferation and the toxicity of this drug. 2000 cells were plated in 96-well plates per well. HPI-4 was added to cells at concentrations of 0, 5 and 10 μM in 100 μl DMEM/F12 with 10% FBS and incubated for 0, 1, 3, 6 and 9 days. Then, 10 μl MST-8 was added to the media in each well and incubated in an environment without light for 90 min. The absorbance value was measured using an enzyme microplate reader at 450 nm wavelength. The relative viability of cells was expressed by OD value.(Only for Reference)

描述

Ciliobrevin A is an inhibitor of hedgehog signaling pathway with an IC50 <10 μM.

储存

Powder: -20°C for 3 years | In solvent: -80°C for 2 years