

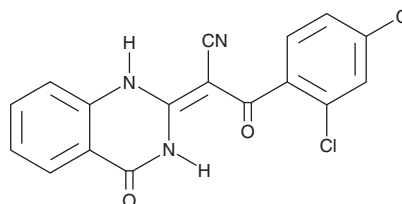
PRODUCT INFORMATION



Ciliobrevin A

Item No. 22587

CAS Registry No.: 302803-72-1
Formal Name: 2,4-dichloro- α -(3,4-dihydro-4-oxo-2(1H)-quinazolinylidene)- β -oxo-benzenepropanenitrile
Synonym: HPI-4
MF: C₁₇H₉Cl₂N₃O₂
FW: 358.2
Purity: \geq 98%
UV/Vis.: λ_{max} : 331 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Ciliobrevin A is supplied as a crystalline solid. A stock solution may be made by dissolving the ciliobrevin A in the solvent of choice, which should be purged with an inert gas. Ciliobrevin A is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ciliobrevin A in these solvents is approximately 20 mg/ml.

Ciliobrevin A is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ciliobrevin A should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ciliobrevin A has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ciliobrevin A is a hedgehog pathway inhibitor that blocks sonic hedgehog (Shh)-induced hedgehog pathway activation (IC₅₀ = 7 μ M).¹ It disrupts primary cilia formation and inhibits the dynein-dependent microtubule gliding and ATPase activities of the cytoplasmic ATPases associated with various cellular activities (AAA+) family. Ciliobrevin A also inhibits mammalian target of rapamycin complex 1 (mTORC1) activity in uninfected and human cytomegalovirus (HCMV)-infected cells, suggesting that mTORC1 activation requires dynein-dependent transport for cellular activation.²

References

1. Firestone, A.J., Weinger, J.S., Maldonado, M., *et al.* Small-molecule inhibitors of the AAA+ ATPase motor cytoplasmic dynein. *Nature* **484**(7392), 125-129 (2012).
2. Clippinger, A.J., and Alwaine, J.C. Dynein mediates the localization and activation of mTOR in normal and human cytomegalovirus-infected cells. *Genes Dev.* **26**(18), 2015-2026 (2012).

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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