

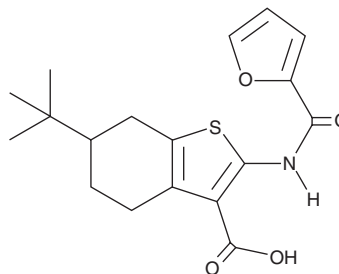
PRODUCT INFORMATION



CaCC(inh)-A01

Item No. 21922

CAS Registry No.: 407587-33-1
Formal Name: 6-(1,1-dimethylethyl)-2-[(2-furanylcarbonyl)amino]-4,5,6,7-tetrahydro-benzo[b]thiophene-3-carboxylic acid
MF: C₁₈H₂₁NO₄S
FW: 347.4
Purity: ≥98%
UV/Vis.: λ_{max}: 228, 258, 343 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

CaCC(inh)-A01 is supplied as a crystalline solid. A stock solution may be made by dissolving the CaCC(inh)-A01 in the solvent of choice, which should be purged with an inert gas. CaCC(inh)-A01 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CaCC(inh)-A01 in these solvents is approximately 30 mg/ml.

CaCC(inh)-A01 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CaCC(inh)-A01 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CaCC(inh)-A01 has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

CaCC(inh)-A01 is a non-selective inhibitor of calcium-activated chloride channels (CaCCs) that blocks ATP-stimulated chloride conductance in human salivary gland, intestinal, and bronchial epithelium (mean IC₅₀ = 10 μM).¹ CaCC(inh)-A01 (30 μM) induces full vasorelaxation of precontracted mouse isolated mesenteric arteries in the presence or absence of chloride.² CaCC(inh)-A01 also attenuates CaCC TMEM16-A-induced proliferation in cancer cell lines through targeted degradation of the protein and reduces the activity of large-conductance calcium-activated potassium channels (K_{Ca}1.1/BK) in human red blood cells.^{3,4}

References

1. De La Fuente, R., Namkung, W., Mills, A., *et al.* Small-molecule screen identifies inhibitors of a human intestinal calcium-activated chloride channel. *Mol. Pharmacol.* **73**(3), 758-768 (2008).
2. Boedtker, D.M.B., Kim, S., Jensen, A.B., *et al.* New selective inhibitors of calcium-activated chloride channels - T16Ainh-A01, CaCCinh-A01 and MONNA - what do they inhibit? *Br. J. Pharmacol.* **172**(16), 4158-4172 (2015).
3. Bill, A., Hall, M.L., Borawski, J., *et al.* Small molecule-facilitated degradation of ANO1 protein: A new targeting approach for anticancer therapeutics. *J. Biol. Chem.* **289**(16), 11029-11041 (2014).
4. Kucherenko, Y.V., Wagner-Britz, L., Bernhardt, I., *et al.* Effect of chloride channel inhibitors on cytosolic Ca²⁺ levels and Ca²⁺-activated K⁺ (Gardos) channel activity in human red blood cells. *J. Membr. Biol.* **246**(4), 315-326 (2013).

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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