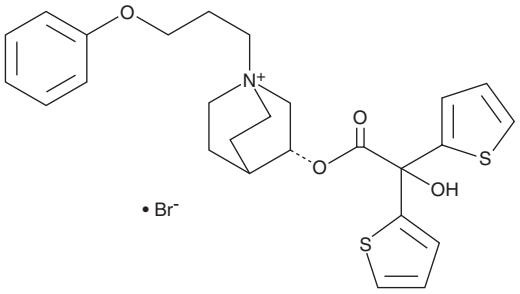
PRODUCT INFORMATION

Aclidinium (bromide)

Item No. 20699

CAS Registry No.: 320345-99-1
Formal Name: (3R)-3-[(2-hydroxy-2,2-di-2-thienylacetyl)oxy]-1-(3-phenoxypropyl)-1-azoniabicyclo[2.2.2]octane, monobromide
Synonyms: LAS 34273, LAS-W 330
MF: $C_{26}H_{30}NO_4S_2 \bullet Br$
FW: 564.6
Purity: ≥95%
UV/Vis.: λ_{max}: 221, 238, 276 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

Aclidinium (bromide) is supplied as a crystalline solid. A stock solution may be made by dissolving the aclidinium (bromide) in the solvent of choice. Aclidinium (bromide) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of aclidinium (bromide) in these solvents is approximately 0.14, 15, and 10 mg/ml, respectively.

Aclidinium (bromide) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, aclidinium (bromide) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Aclidinium (bromide) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Aclidinium is an antagonist of muscarinic acetylcholine receptors (mAChRs; K_is = 0.1, 0.14, 0.14, 0.21, and 0.16 for the M_1-M_5 receptors, respectively).[1] It induces relaxation of precontracted isolated human bronchi when used at a concentration of 0.1 µM.[2] Aclidinium reduces bronchoconstriction induced by ACh (Item No. 23829) in anesthetized guinea pigs when administered *via* nebulization.[1] Formulations containing aclidinium have been used in the treatment of chronic obstructive pulmonary disease (COPD).

References

1. Gavaldà, A., Miralpeix, M.R., Ramos, I., *et al.* Characterization of aclidinium bromide, a novel inhaled muscarinic antagonist, with long duration of action and a favorable pharmacological profile. *J. Pharmacol. Exp. Ther.* **331(2)**, 740-751 (2009).
2. Rogliani, P., Calzetta, L., Ora, J., *et al.* Pharmacological assessment of the onset of action of aclidinium and glycopyrronium versus tiotropium in COPD patients and human isolated bronchi. *Eur. J. Pharmacol.* **761**, 383-390 (2015).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM