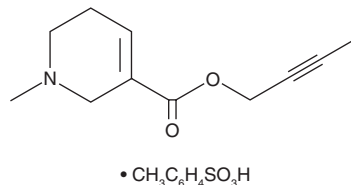


PRODUCT INFORMATION

Arecaidine but-2-ynyl ester (tosylate)

Item No. 39816

CAS Registry No.: 119630-77-2
Formal Name: 1,2,5,6-tetrahydro-1-methyl-3-pyridinecarboxylic acid, 2-butyn-1-yl ester 4-methylbenzenesulfonate
MF: $C_{11}H_{15}NO_2 \bullet C_7H_8O_3S$
FW: 365.4
Purity: $\geq 98\%$
Supplied as: A solid
Storage: $-20^\circ C$
Stability: ≥ 4 years



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

Laboratory Procedures

Arecaidine but-2-ynyl ester (tosylate) is supplied as a solid. A stock solution may be made by dissolving the arecaidine but-2-ynyl ester (tosylate) in the solvent of choice, which should be purged with an inert gas. Arecaidine but-2-ynyl ester (tosylate) is sparingly soluble (1-10 mg/ml) in DMSO and slightly soluble (0.1-1 mg/ml) in methanol.

Description

Arecaidine but-2-ynyl ester is an agonist of muscarinic acetylcholine receptors (mAChRs).¹ It binds to M_1 , M_2 , and M_3 mAChRs ($pD_{2S} = 7.93, 8.33$, and 7.67 , respectively). Arecaidine but-2-ynyl ester inhibits calcium channel currents in a whole-cell patch clamp assay using primary rat sphenopalatine ganglia (SPG) cells ($EC_{50} = 3.6 \mu M$).² It inhibits transmural nerve stimulation-induced vasodilation in isolated and washed porcine basilar arterial rings ($EC_{50} = 0.5 \mu M$). *In vivo*, arecaidine but-2-ynyl ester reduces mean arterial pressure (MAP) and beats per minute (BPM) in normotensive rats in a dose-dependent manner.³

References

1. Tumiatti, V., Wehrle, J., Hildebrandt, C., *et al.* Muscarinic properties of compounds related to arecaidine propargyl ester. *Arzneimittelforschung*. **50**(1), 11-15 (2000).
2. Liu, J., Evans, M.S., and Lee, T.J.-F. Presynaptic muscarinic M_2 -receptor-mediated inhibition of N-type Ca^{2+} channels in cultured sphenopalatine ganglion: Direct evidence for acetylcholine inhibition of cerebral nitroergic neurogenic vasodilation. *J. Pharmacol. Exp. Ther.* **303**(1), 397-405 (2002).
3. Zhang, C., Sun, T., Zhou, P., *et al.* Role of muscarinic acetylcholine receptor-2 in the cerebellar cortex in cardiovascular modulation in anaesthetized rats. *Neurochem. Res.* **41**(4), 804-812 (2016).

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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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