

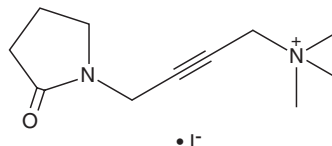
PRODUCT INFORMATION



Oxotremorine M (iodide)

Item No. 20847

CAS Registry No.: 3854-04-4
Formal Name: N,N,N-trimethyl-4-(2-oxo-1-pyrrolidinyl)-
2-butyne-1-aminium, monoiodide
MF: $C_{11}H_{19}N_2O \cdot I$
FW: 322.2
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

Oxotremorine M (iodide) is supplied as a solid. A stock solution may be made by dissolving the oxotremorine M (iodide) in the solvent of choice, which should be purged with an inert gas. Oxotremorine M (iodide) is soluble in the organic solvent DMSO.

Description

Oxotremorine M is a non-selective muscarinic (M) acetylcholine receptor agonist that induces phosphoinositide hydrolysis in mouse ileum isolated from wild-type, M_2 , M_3 , and M_2/M_3 knockout mice (EC_{50} s = 0.36, 0.52, 1.62, and 1.48 μM , respectively).¹ It also increases M_4 -induced inhibition of calcium currents in NG108-15 mouse neuroblastoma X rat glioma hybrid cells (EC_{50} = 0.14 μM).² Oxotremorine M inhibits KCNQ2/3 potassium currents in *Xenopus* oocytes expressing M_1 receptors and KCNQ2/3 potassium channels (IC_{50} = 1.1 μM).³ It also directly inhibits KCNQ2/3 potassium channels, decreasing KCNQ2/3 potassium currents in *Xenopus* oocytes lacking muscarinic receptors in a dose-dependent manner.

References

1. Tran, J.A., Matsui, M., and Ehlert, F.J. Differential coupling of muscarinic M_1 , M_2 , and M_3 receptors to phosphoinositide hydrolysis in urinary bladder and longitudinal muscle of the ileum of the mouse. *J. Pharmacol. Exp. Ther.* **318**(2), 649-656 (2006).
2. Caulfield, M.P., and Brown, D.A. Pharmacology of the putative M_4 muscarinic receptor mediating Ca-current inhibition in neuroblastoma x glioma hybrid (NG 108-15) cells. *Br. J. Pharmacol.* **104**(1), 39-44 (1991).
3. Zwart, R., Reed, H., Clarke, S., et al. A novel muscarinic receptor-independent mechanism of KCNQ2/3 potassium channel blockade by Oxotremorine-M. *Eur. J. Pharmacol.* **791**, 221-228 (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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