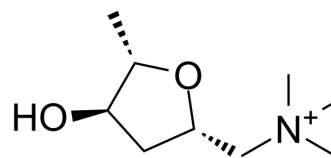


Muscarine

Cat. No.:	HY-121404
CAS No.:	300-54-9
Molecular Formula:	C ₉ H ₂₀ NO ₂ ⁺
Molecular Weight:	174.26
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Muscarine ((+)-Muscarine) is an agonist of prototype mAChR. Muscarine is a toxin that can stimulate the parasympathetic nervous system ^{[1][2]} .
In Vitro	Muscarine (100 μM) induces an intracellular calcium signal amplitude similar to the one triggered by 10 μM acetylcholine in brain microvascular endothelial cells (BMVECs) and brain-derived Endothelial cells.3 (bEnd.3) ^[1] . Muscarine (1-30 μM; 2 min) produces a dose-dependent hyperpolarization in a sub-population of the nucleus raphe magnus (NRM) cells that contain 5-hydroxytryptamine (5-HT) on the NRM neurons with an EC ₅₀ value of 2.7 μM ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Beatrice Mihaela Radu, et al. All muscarinic acetylcholine receptors (M 1-M 5) are expressed in murine brain microvascular endothelium. Sci Rep. 2017 Jul 11;7(1):5083.
- [2]. Z Z Pan, et al. Muscarine hyperpolarizes a subpopulation of neurons by activating an M2 muscarinic receptor in rat nucleus raphe magnus in vitro. J Neurosci. 1994 Mar;14(3 Pt 1):1332-8.

Caution: Product has not been fully validated for medical applications. For research use only.

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