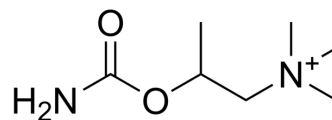


## Bethanechol

Cat. No.:	HY-B0406
CAS No.:	674-38-4
Molecular Formula:	C <sub>7</sub> H <sub>17</sub> N <sub>2</sub> O <sub>2</sub>
Molecular Weight:	161.22
Target:	mAChR
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Bethanechol (Carbamyl-β-methylcholine), a parasympathomimetic agent, is a mAChR agonist that exerts its effects via directly stimulating the mAChR (M1, M2, M3, M4, and M5) of the parasympathetic nervous system <sup>[1]</sup> .			
<b>IC<sub>50</sub> &amp; Target</b>	mAChR1	mAChR3	mAChR4	mAChR5
<b>In Vitro</b>	Bethanechol (0.3-300 μM) significantly reduces ileal pacemaker potentials <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
<b>In Vivo</b>	Bethanechol (2-12 mg/kg; i.p.) induces drinking and increased urine output of rats in a dose-dependent fashion <sup>[4]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			
	Animal Model:	Female rats of the Blue Spruce Farms (Sprague-Dawley) (280-330 g) <sup>[4]</sup>		
	Dosage:	2 mg/kg, 4 mg/kg, 8 mg/kg, 12 mg/kg		
	Administration:	Intraperitoneal injection		
	Result:	Increased water intake during the first hr in a dose-dependent fashion up to the highest dose administered (12 mg/kg).		

### CUSTOMER VALIDATION

- Research Square Preprint. 2022 Mar.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

### REFERENCES

[1]. Julia Yuen Hang Liu, et al. Acetylcholine exerts inhibitory and excitatory actions on mouse ileal pacemaker activity: role of muscarinic versus nicotinic receptors. *Am J Physiol Gastrointest Liver Physiol.* 2020 Jul 1;319(1):G97-G107.

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[2]. M J Fregly, et al. Bethanechol-induced water intake in rats: possible mechanisms of induction. Pharmacol Biochem Behav. 1982 Oct;17(4):727-32.

[3]. Inderbir S. Padda, et al. Bethanechol. Treasure Island (FL): StatPearls Publishing; 2020 Jan-.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA