

Table 1. Effects of Antagonists on Acetylcholine- and Histamine-induced Tracheal Contraction

Antagonist	Concentration (μM)	Inhibition of 3 μM ACh-induced contraction (%)	Inhibition of 6 μM histamine-induced contraction (%)
Atropine	0.01	33.5 \pm 2.5	
	0.03	86.1 \pm 1.9	
	0.1	100.0 \pm 0.0	
	1		8.5 \pm 0.9
	3		31.7 \pm 1.6
	10		58.1 \pm 3.4
4-DAMP	0.01	56.7 \pm 4.0	
	0.03	94.2 \pm 2.9	
	0.1	100.0 \pm 0.0	
	1		15.5 \pm 2.1
	3		34.7 \pm 1.6
	10		67.5 \pm 2.2
Diphenhydramine	0.01	11.5 \pm 1.8	36.8 \pm 3.6
	0.03	27.2 \pm 6.2	70.9 \pm 3.1
	0.1	45.6 \pm 2.1	100.0 \pm 0.0
	0.3	65.4 \pm 4.3	
	1	89.1 \pm 1.9	
	3	100.0 \pm 0.0	
Mepyramine	0.003		35.5 \pm 2.5
	0.01		94.1 \pm 2.8
	0.03		100.0 \pm 0.0
	1	6.5 \pm 1.8	
	3	8.3 \pm 1.3	
	10	12.4 \pm 1.7	

Effects of hemicholinium-3 and 4-DAMP pretreatment on EFS- and MB-induced tracheal contractions

Pretreatment with hemicholinium-3 (100 μM) gradually attenuated EFS-induced cholinergic contraction (Fig. 4a) but had no significant effect on MB-induced contraction ($p = 0.06$, $n = 5$) (Fig. 3, column 3). 4-DAMP (0.1 μM) pretreatment completely abolished EFS-induced cholinergic contraction but not MB-induced contraction (Fig. 4b).

Effects of compound 48/80 and sodium cromolyn on MB-induced tracheal contraction

Pretreating with compound 48/80 induced a dose-dependent tracheal contraction which was completely

abolished by mepyramine. After washing it out, compound 48/80 had no effect on basal tension during a second challenge (data not shown). MB-induced contractions were not significantly affected by pretreatment with 2 mg/ml compound 48/80 ($p = 0.39$, $n = 5$) (Fig. 3, column 2). Similarly, sodium cromolyn (100 μM) pretreatment also showed no significant effect on MB-induced contractions ($p = 0.65$, $n = 5$) (Fig. 3, column 4).

Effects of PEG-SOD and PEG-catalase on MB-induced tracheal contraction

Preincubation with PEG-catalase (300 U/ml) resulted in a minor but insignificant increase of MB-induced tracheal contraction ($p = 0.21$, $n = 5$) (Fig. 3,