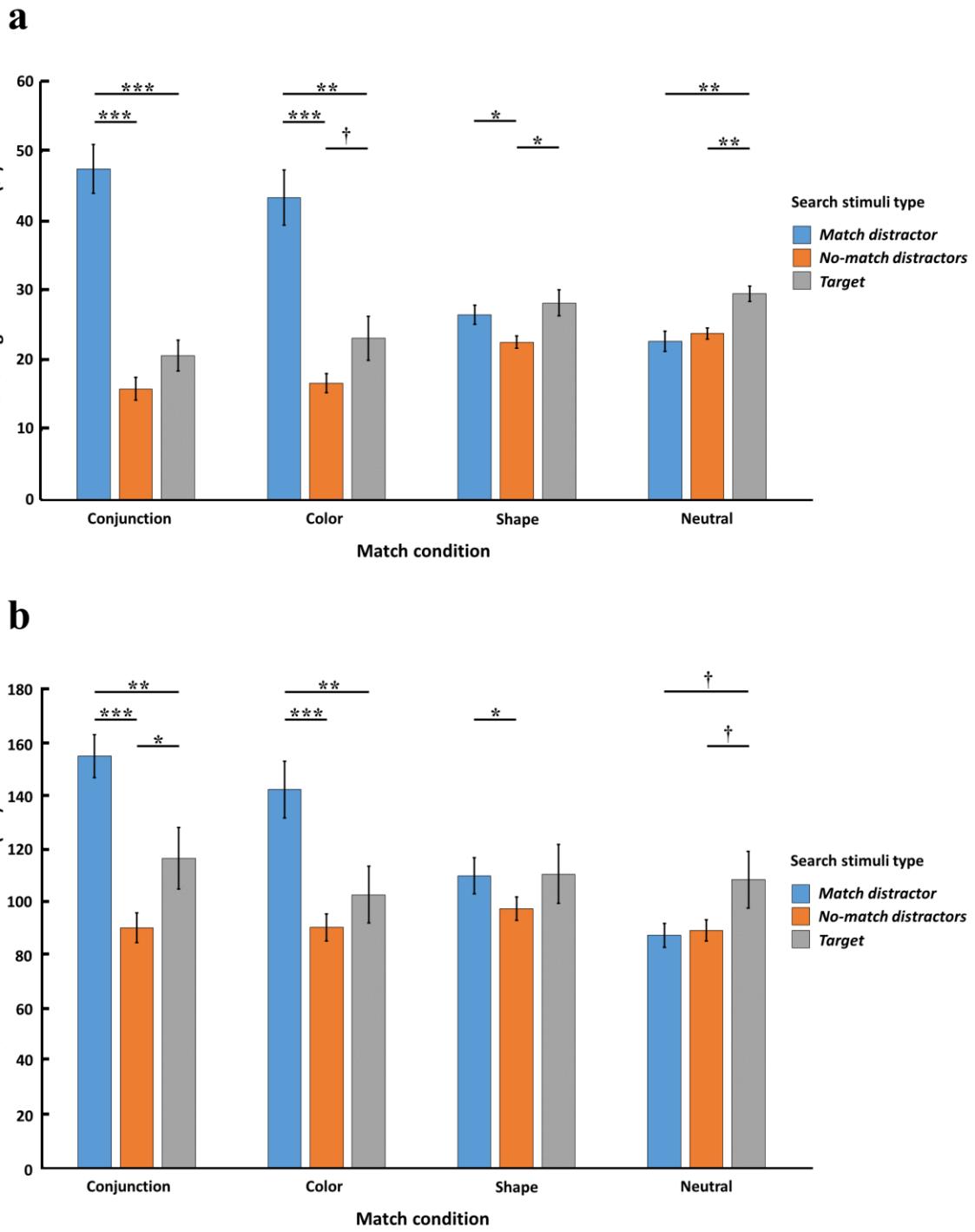
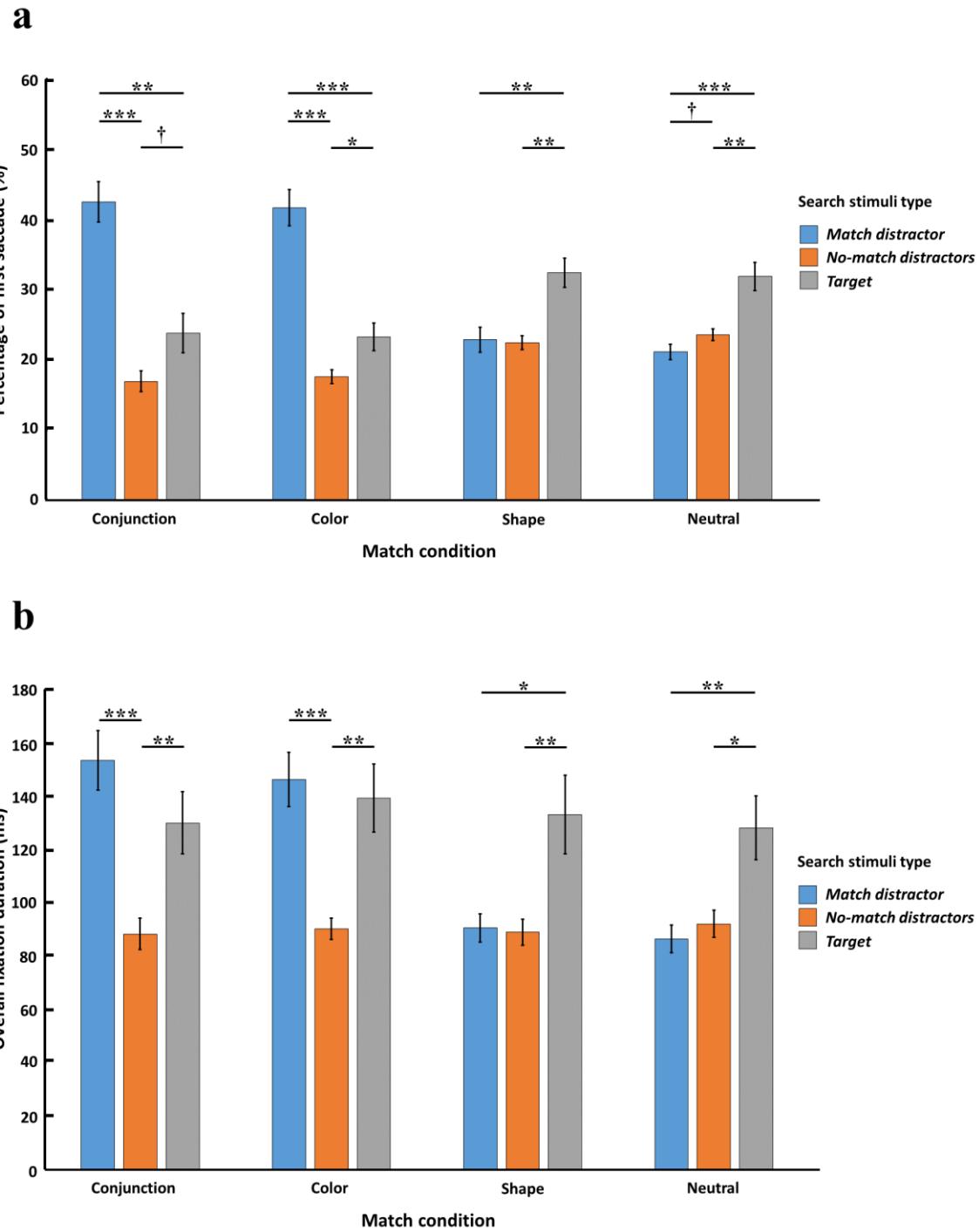


## Supplementary material



Supplementary Figure 1. Eye movement data of Experiment 2a. *a*, The proportion of the first saccade landing on each stimulus during visual search in four match conditions. *b*, The overall fixation duration

on each stimulus during visual search in four match conditions. The data of no-match distractors was the average of the two no-match distractors. Mean and SEM shown for each condition. Significant results of the paired *t* tests were shown:  $\dagger p < 0.1$ ,  $*p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ .



Supplementary Figure 2. Eye movement data of Experiment 2b. *a*, The proportion of the first saccade landing on each stimulus during visual search in four match conditions. *b*, The overall fixation duration on each stimulus during visual search in four match conditions. The data of no-match distractors was

the average of the two no-match distractors. Mean and SEM shown for each condition. Significant results of the paired *t* tests were shown:  ${}^{\dagger}p < 0.1$ ,  $*p < 0.05$ ,  $**p < 0.01$ ,  $***p < 0.001$ .

	Experiments	Match condition			
		Color	Shape	Conjunction	Neutral
Visual search	1a	99	99	99	99
	1b	99	99	99	99
	2a	100	98	99	100
	2b	99	99	99	99
	3a	99	99	99	99
	3b	99	99	99	99
	4a	99	99	NA	99
	4b	99	99	NA	99
	6a	99	99	99	99
	6b	98	98	99	98
VWM	1a	97	97	96	97
	1b	98	99	99	98
	2a	97	97	98	97
	2b	98	98	98	97
	3a	97	97	98	97
	3b	96	97	97	97
	4a	95	95	NA	95
	4b	92	93	NA	93
	6a	88	88	89	88
	6b	91	93	93	91

		No-change condition	Change condition
Change detection	5a	97	97
	5b	98	97

Supplementary Table 1. The averaged accuracy (%) for each condition in all experiments (after removing the catch trials). NA: not applicable.