

Supplemental Data

Table 1S DG Arc mRNA learning-specific expression in 400- μ m-thick coronal HC segments following navigation based on recent and remote spatial memories

DG	Recent memory			Remote memory			
Segment, mm from interaural line	DF=N-3	ANOVA, F-statistics	Fisher's <i>post hoc</i> test, p value	DF=N-3	ANOVA, F-statistics	Fisher's <i>pos hoc</i> test, p value	t-test, p value
6.61-7.0	27	38.23	0.55	27	36.46	0.22	0.77
6.21-6.6	72	103	0.066	63	82.15	0.73	0.54
5.81-6.2	87	106.7	<0.0001	111	154.2	0.10	<0.01
5.41-5.8	69	118.9	<0.0001	117	183.2	0.3	<0.0005
5.01-5.4	87	56.9	<0.0001	102	203.4	<0.036	0.11
4.61-5.0	15	22.68	<0.005	54	44.75	0.59	0.11
4.21-4.6	-	-	-	33	30.1	0.98	-
3.81-4.2	36	84.3	<0.002	39	77.8	<0.0001	0.65
3.01-3.55	48	24.65	<0.0003	33	26.69	<0.02	0.83
2.61-3.0	42	29.9	<0.0001	18	10.79	0.066	0.27

For all F-statistics $p < 0.0001$ has been reached. Fisher's *post hoc* test indicates a significant difference between WMT and SW groups only. Differences between WMT and naïve, and SW and naïve were always highly significant ($p < 0.0001$) and are not represented in this table. The ventral HC segments are presented below the dorsal HC segments and have similar coordinates. The segments 7.0-7.4; 3.41-3.8; 4.21-4.6 and 3.81-4.2 with the number of data points less than four were not included in the statistical analysis, and other such segments are indicated by (-). Borders of some segments were slightly extended beyond 400- μ m limit to include few data points. T-test was applied to compare the normalized magnitude of recent and long-term memory signal for every 400- μ m segment.

Table 2S CA3 Arc mRNA learning-specific expression in 400- μ m-thick coronal HC segments following navigation based on recent and remote spatial memories

CA3	Recent memory			Remote memory			t-test, p value
	DF=N-3	ANOVA, F-statistics	Fisher's <i>post hoc</i> test, p value	DF=N-3	ANOVA, F- statistics	Fisher's <i>pos hoc</i> test, p value	
7.01-7.4	18	42.2	0.62	54	144.3	<0.022	0.61
6.61-7.0	69	138.2	<0.048	63	228.4	<0.006	0.89
6.21-6.6	81	377.1	<0.028	75	140.9	<0.0001	<0.05
5.81-6.2	87	412.6	<0.0001	104	404.9	<0.0001	<0.03
5.41-5.8	66	249.5	<0.0001	117	229.3	0.21	<0.001
5.01-5.4	90	216.9	<0.0001	108	289.4	0.45	<0.0003
4.69-5.0	12	28.5	<0.043	42	100.5	<0.0005	0.94
4.21-4.68	-	-	-	45	92.6	0.21	-
3.81-4.2	39	22.6	0.53	13	24.98	0.32	0.29
3.01-3.8	9	2.6	0.13	14	151.8	<0.0057	0.39

See **Table 1S** for details.

Table 3S CA1 learning-specific Arc mRNA expressions in 400- μ m-thick coronal HC segments following navigation based on recent and remote spatial memories

CA1	Recent memory			Remote memory			t-test, p value
	DF=N-3	ANOVA, F-statistics	Fisher's <i>post hoc</i> test, p value	DF=N-3	ANOVA, F-statistics	Fisher's <i>pos hoc</i> test, p value	
Segment, mm from interaural line							
6.61-7.0	66	57.3	0.95	72	186.1	0.096	0.54
6.21-6.6	81	262.9	0.41	75	114.9	<0.025	<0.05
5.81-6.2	87	318.5	<0.0001	111	484.7	0.139	<0.05
5.41-5.8	66	465.5	<0.0001	117	204.1	0.93	<0.05
5.01-5.4	90	232.7	<0.0001	102	374.9	<0.048	<0.004
4.61-5.0	15	37.7	<0.027	54	110.5	0.36	0.42
4.21-4.6	-	-	-	36	251.9	0.68	-
3.81-4.2	42	107.3	0.62	39	248.2	0.79	0.69
4.21-4.6	-	-	-	42	85.3	0.81	-
3.81-4.2	33	25.67	<0.004	36	69.4	0.2	0.052
3.01-3.4	57	119.82	<0.0001	33	165.7	0.12	<0.0007
2.61-3.0	48	169.6	<0.0001	27	70.1	0.22	<0.0004

See **Table 1S** for details.

Table 4S Subiculum Arc mRNA learning-specific expression in 400- μ m-thick coronal HC segments following navigation based on recent and remote spatial memory

Subiculum	Recent memory			Remote memory			t-test, p value
	DF=N-3	ANOVA, F-statistics	Fisher's <i>post hoc</i> test, p value	DF=N-3	ANOVA, F-statistics	Fisher's <i>pos hoc</i> test, p value	
Segment, mm from interaural line							
5.81-6.2	27	139.5	<0.003	45	251.2	0.025	0.27
5.41-5.8	57	230.1	<0.0001	114	250.2	0.49	<0.03
5.01-5.4	90	248.1	0.42	102	312.4	0.97	0.73
4.61-5.0	9	12.7	<0.038	54	121.2	<0.0009	0.21
4.21-4.6	-	-	-	36	88.9	<0.0017	-
3.81-4.2	39	130.07	0.36	39	336.2	0.59	0.46
3.37-3.8	15	39.86	0.21	-	-	-	-
4.21-4.6	-	-	-	33	52.4	0.25	-
3.81-4.2	33	17.39	0.38	39	59.2	0.187	0.86
3.01-3.4	93	269.1	<0.0001	45	342.1	<0.0036	<0.02
2.61-3.0	108	318.2	<0.0001	57	365.2	<0.0001	<0.009

See **Table 1S** for details.