

Combined treatment with the phenolics (-)-epigallocatechin-3-gallate and ferulic acid improves cognition and reduces Alzheimer-like pathology in mice

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APP/PS1-V			APP/PS1-EGCG		
	Training	Retention test		Training	Retention test
1	56.522	42.105	1	60.000	58.824
2	54.545	43.750	2	42.857	57.895
3	45.455	55.000	3	46.154	57.143
4	50.000	53.846	4	60.000	55.556
5	38.889	44.444	5	41.667	55.556
6	60.000	57.143	6	56.250	63.636
7	42.857	47.368	7	60.000	75.000
8	54.167	56.522	8	47.059	62.500
Mean	50.304	50.022	Mean	51.748	60.764
SD	7.319	6.240	SD	8.093	6.473

APP/PS1-FA			APP/PS1-EGCG/FA		
	Training	Retention test		Training	Retention test
1	48.148	60.000	1	43.750	66.667
2	43.478	58.824	2	50.000	73.913
3	53.846	56.250	3	57.143	73.333
4	57.143	57.143	4	57.895	80.000
5	54.839	73.684	5	56.250	64.000
6	58.333	58.824	6	52.941	63.636
7	57.692	57.143	7	40.000	76.471
8	46.154	66.667	8	56.250	75.000
Mean	52.454	61.067	Mean	51.779	71.627
SD	5.737	6.045	SD	6.696	6.091

WT-V			WT-EGCG		
	Training	Retention test		Training	Retention test
1	56.250	73.333	1	52.632	76.190
2	53.125	66.667	2	56.250	68.421
3	51.613	63.636	3	53.333	66.667
4	42.857	70.588	4	60.000	64.000
5	57.143	69.565	5	45.455	78.947
6	52.174	72.222	6	55.556	68.182
7	41.667	73.333	7	44.444	77.778
8	54.167	82.353	8	43.750	68.182
Mean	51.124	71.462	Mean	51.427	71.046
SD	5.793	5.54	SD	6.121	5.69

WT-FA			WT-EGCG/FA		
	Training	Retention test		Training	Retention test
1	56.522	76.000	1	56.250	73.333
2	51.429	75.000	2	51.515	71.429
3	55.556	73.913	3	42.857	68.182
4	56.000	60.000	4	57.143	77.778
5	52.381	78.571	5	47.059	63.158
6	45.455	69.565	6	44.444	71.429
7	42.857	71.429	7	63.636	63.636
8	42.105	66.667	8	50.000	80.000
Mean	50.288	71.393	Mean	51.613	71.118
SD	5.982	5.947	SD	7.051	6.051

Table S1 (Supporting information of Figure 1A)

APP/PS1-V

	Number of arms entered	Alternation (%)
1	46	34.091
2	45	37.209
3	53	47.059
4	47	53.333
5	61	40.678
6	43	41.463
7	47	40.000
8	44	38.095
Mean	48.250	41.491
SD	5.970	6.080

APP/PS1-EGCG

	Number of arms entered	Alternation (%)
1	32	60.000
2	41	58.974
3	38	52.778
4	47	51.111
5	33	61.290
6	46	50.000
7	38	41.667
8	37	57.143
Mean	39.000	54.120
SD	5.451	6.564

APP/PS1-FA

	Number of arms entered	Alternation (%)
1	42	47.500
2	31	51.724
3	38	52.778
4	42	45.000
5	35	57.576
6	39	48.649
7	46	63.636
8	34	53.125
Mean	38.375	52.498
SD	4.926	5.939

APP/PS1-EGCG/FA

	Number of arms entered	Alternation (%)
1	30	60.714
2	22	75.000
3	29	62.963
4	23	76.190
5	28	73.077
6	29	66.667
7	39	62.162
8	32	63.333
Mean	29.000	67.513
SD	5.292	6.280

WT-V

	Number of arms entered	Alternation (%)
1	26	70.833
2	27	72.000
3	30	71.429
4	31	62.069
5	25	65.217
6	37	71.429
7	30	53.571
8	20	72.222
Mean	28.250	67.346
SD	5.007	6.687

WT-EGCG

	Number of arms entered	Alternation (%)
1	28	73.077
2	31	62.069
3	33	67.742
4	21	78.947
5	20	72.222
6	24	72.727
7	34	59.375
8	36	64.706
Mean	28.375	68.858
SD	6.116	6.551

WT-FA

	Number of arms entered	Alternation (%)
1	27	64.000
2	38	69.444
3	34	59.375
4	28	73.077
5	27	64.000
6	25	52.174
7	18	75.000
8	31	72.414
Mean	28.500	66.186
SD	6.024	7.809

WT-EGCG/FA

	Number of arms entered	Alternation (%)
1	23	71.429
2	34	56.250
3	22	70.000
4	25	78.261
5	32	70.000
6	33	77.419
7	34	71.875
8	35	63.636
Mean	29.750	69.859
SD	5.445	7.154

Errors**APP/PS1-V****Day 1****Day 2**

	1	2	3	4	5	6	7	8	9	10
1	4.667	3.333	5.667	2.333	4.000	3.667	3.667	3.667	2.667	3.000
2	5.000	2.667	6.333	4.667	5.000	4.667	4.667	3.667	3.000	4.000
3	3.000	4.333	5.333	6.333	3.667	4.667	4.333	6.000	6.000	5.000
4	4.000	3.667	3.667	3.333	3.000	4.000	4.000	4.000	5.000	3.667
5	10.333	4.000	3.667	2.667	4.333	4.333	3.333	3.333	5.000	5.333
6	4.333	9.667	3.000	3.333	3.333	5.000	4.667	4.333	4.333	2.000
7	4.667	5.000	3.333	5.333	3.000	4.000	3.667	3.333	4.000	6.667
8	7.667	4.333	3.000	6.667	7.333	7.333	8.667	5.333	2.333	4.333
Mean	5.458	4.625	4.250	4.333	4.208	4.708	4.625	4.208	4.042	4.250
SD	2.377	2.156	1.318	1.662	1.436	1.147	1.704	0.975	1.290	1.445

APP/PS1-EGCG**Day 1****Day 2**

	1	2	3	4	5	6	7	8	9	10
1	2.333	1.000	2.000	1.333	3.000	3.333	2.333	2.333	3.333	1.667
2	7.333	6.667	2.333	2.667	1.333	2.667	2.667	1.667	0.667	0.667
3	4.333	5.000	3.000	3.000	1.667	6.000	3.667	3.667	3.333	3.000
4	5.000	4.000	5.333	4.667	3.333	6.333	5.333	3.000	3.333	1.667
5	5.333	4.000	3.667	3.000	4.667	3.667	2.333	4.667	2.667	3.667
6	2.000	2.333	4.333	1.667	2.000	3.000	4.667	0.667	1.333	2.333
7	5.333	4.667	3.667	4.333	4.000	2.333	3.333	4.000	2.667	0.667
8	4.333	4.333	3.333	3.667	2.667	2.333	3.667	2.000	2.000	5.000
Mean	4.500	4.000	3.458	3.042	2.833	3.708	3.500	2.750	2.417	2.333
SD	1.718	1.709	1.068	1.174	1.155	1.588	1.084	1.330	1.004	1.501

APP/PS1-FA**Day 1****Day 2**

	1	2	3	4	5	6	7	8	9	10
1	3.667	3.333	3.000	5.333	2.000	3.000	3.333	3.000	3.333	4.000
2	2.667	2.667	1.667	2.667	3.667	3.333	2.667	3.667	3.333	2.000
3	8.333	5.333	4.667	3.333	1.667	4.667	3.333	4.000	3.667	3.000
4	3.333	3.333	3.667	3.333	1.333	4.333	3.000	0.667	1.333	1.000
5	3.667	2.000	1.667	1.667	1.333	2.667	1.333	2.000	1.333	1.000
6	5.667	4.333	5.000	2.333	3.000	2.333	2.333	3.000	0.000	3.667
7	3.667	5.000	3.667	4.667	6.000	5.000	6.000	5.000	4.333	4.000
8	5.333	7.333	6.000	2.000	2.333	3.667	3.000	1.333	3.667	1.333
Mean	4.542	4.167	3.667	3.167	2.667	3.625	3.125	2.833	2.625	2.500
SD	1.834	1.709	1.543	1.285	1.574	0.967	1.333	1.436	1.527	1.321

APP/PS1-EGCG/FA**Day 1****Day 2**

	1	2	3	4	5	6	7	8	9	10
1	1.333	3.333	4.000	2.000	0.667	3.667	1.000	0.667	2.667	1.667
2	3.333	2.000	1.333	3.000	1.333	3.000	2.000	0.667	2.333	2.000
3	5.333	2.667	1.667	1.667	2.333	2.333	1.667	3.333	3.000	3.000
4	5.000	3.333	1.667	5.000	1.000	3.000	3.667	3.000	3.000	3.333
5	2.333	2.000	4.667	2.000	3.667	3.000	2.000	0.667	0.333	1.000
6	6.000	6.667	4.667	3.000	4.000	2.333	3.667	4.333	1.000	3.000
7	6.333	4.333	3.000	3.333	4.000	6.333	5.333	4.000	3.333	2.000
8	5.333	5.667	4.667	4.333	4.667	3.333	3.667	2.667	2.000	0.667
Mean	4.375	3.750	3.208	3.042	2.708	3.375	2.875	2.417	2.208	2.083
SD	1.821	1.697	1.479	1.174	1.568	1.278	1.436	1.540	1.053	0.972

Errors**WT-V**

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	3.333	2.000	3.333	1.667	2.000	2.333	2.667	1.333	2.333	2.667
2	3.333	1.667	1.333	3.667	3.000	5.333	2.000	2.000	3.667	1.667
3	3.333	5.667	3.000	3.000	4.000	5.000	5.333	3.667	3.667	3.000
4	2.333	7.333	2.000	3.333	2.667	2.333	2.333	4.667	3.667	3.333
5	1.667	3.667	2.333	1.000	2.333	5.333	1.667	3.333	1.667	1.667
6	5.667	4.333	3.667	1.333	0.333	2.000	2.667	1.333	1.333	1.000
7	7.667	2.667	5.667	3.667	2.667	4.333	3.333	5.000	2.333	3.333
8	6.333	2.000	2.333	4.667	3.333	2.333	2.000	2.000	2.333	2.333
Mean	4.208	3.667	2.958	2.792	2.542	3.625	2.750	2.917	2.625	2.375
SD	2.100	2.016	1.327	1.309	1.083	1.506	1.165	1.456	0.933	0.863

WT-EGCG

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	3.667	3.333	2.333	3.333	1.333	4.667	3.667	3.000	2.000	3.667
2	5.333	6.000	2.667	3.000	2.667	3.333	3.333	2.667	4.333	2.333
3	6.667	5.333	7.000	3.667	3.667	5.000	5.333	4.667	5.333	5.333
4	3.333	4.333	4.333	4.333	4.000	5.000	4.000	2.667	1.333	1.667
5	4.667	2.667	2.333	1.333	3.000	2.000	2.000	3.333	1.000	0.667
6	3.000	4.667	3.667	2.333	3.333	4.000	1.667	2.000	3.000	0.667
7	4.000	2.667	1.667	2.000	1.333	3.000	2.333	1.667	1.667	1.000
8	5.333	1.667	2.000	4.667	3.667	3.333	2.667	2.333	2.667	2.000
Mean	4.500	3.833	3.250	3.083	2.875	3.792	3.125	2.792	2.667	2.167
SD	1.234	1.491	1.753	1.151	1.038	1.068	1.208	0.925	1.512	1.623

APP/PS1-FA

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	2.333	2.667	2.000	2.000	1.333	3.333	2.000	4.000	1.333	1.000
2	6.000	4.333	4.333	2.333	5.333	4.000	3.667	2.000	2.333	2.667
3	3.667	2.000	1.667	2.667	1.667	2.333	3.000	2.000	2.000	1.667
4	2.333	1.667	3.000	1.667	2.333	3.333	0.667	2.000	1.667	3.667
5	3.667	4.667	0.667	3.333	4.000	1.667	1.667	2.667	2.000	0.333
6	5.667	3.667	4.333	4.667	4.000	4.000	4.000	4.333	3.333	2.667
7	8.333	7.000	3.667	4.667	2.667	5.000	4.000	3.000	2.667	2.000
8	2.667	3.333	3.667	4.333	3.000	4.333	3.000	3.333	4.000	3.000
Mean	4.333	3.667	2.917	3.208	3.042	3.500	2.750	2.917	2.417	2.125
SD	2.146	1.709	1.342	1.221	1.339	1.084	1.205	0.922	0.886	1.097

WT-EGCG/FA

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	2.667	3.333	4.000	2.333	1.667	3.667	4.333	3.333	4.333	1.333
2	3.000	3.333	0.667	4.333	1.333	4.667	2.333	3.333	1.333	1.667
3	3.333	2.667	0.333	0.000	0.667	1.333	1.667	0.667	1.667	2.000
4	2.333	7.000	4.000	3.000	2.000	6.000	4.333	5.333	3.333	4.000
5	6.667	4.000	3.000	1.333	2.667	3.000	2.000	2.000	0.667	2.333
6	7.333	2.667	4.000	2.333	3.667	2.667	5.333	1.333	4.000	2.000
7	3.333	5.000	6.000	3.333	3.333	5.667	1.667	2.000	2.667	5.000
8	6.667	2.667	1.000	2.333	3.000	4.000	3.667	3.000	1.000	1.000
Mean	4.417	3.833	2.875	2.375	2.292	3.875	3.167	2.625	2.375	2.417
SD	2.084	1.512	2.015	1.302	1.046	1.563	1.425	1.452	1.408	1.377

Escape latency (s)

	APP/PS1-V		Day 1			Day 2				
	1	2	3	4	5	6	7	8	9	10
1	33.333	36.000	40.667	21.333	22.000	28.333	28.333	30.333	25.000	22.000
2	35.000	29.667	38.667	28.000	39.000	26.000	29.000	28.333	27.667	31.333
3	31.000	35.333	40.000	36.667	31.667	29.333	32.333	36.000	41.333	32.333
4	34.333	24.333	31.333	26.667	19.667	32.333	33.000	42.333	34.333	36.000
5	60.000	32.000	28.333	23.333	25.667	36.333	26.333	33.333	37.333	41.333
6	37.000	51.667	24.000	31.000	27.333	34.000	31.667	34.000	33.333	26.000
7	42.000	29.667	27.000	40.667	32.333	37.000	34.667	35.667	35.000	46.667
8	28.333	32.000	25.333	38.333	45.000	53.000	56.667	51.667	21.333	34.333
Mean	37.625	33.833	31.917	30.750	30.333	34.542	34.000	36.458	31.917	33.750
SD	9.903	8.077	6.875	7.160	8.536	8.399	9.557	7.426	6.690	7.890

	APP/PS1-EGCG		Day 1			Day 2				
	1	2	3	4	5	6	7	8	9	10
1	16.333	8.000	12.000	13.000	18.000	25.667	19.667	18.333	34.000	13.000
2	45.667	50.667	16.000	18.000	8.000	19.000	19.667	11.000	4.000	4.667
3	21.667	34.333	18.000	16.667	12.333	49.333	36.667	43.667	27.667	27.000
4	48.000	43.333	51.667	40.333	20.333	55.000	46.667	21.000	21.000	8.000
5	35.333	29.333	21.000	30.667	30.333	29.000	16.333	37.333	25.333	27.667
6	23.000	18.333	38.000	18.333	9.667	18.667	13.000	8.333	14.333	14.667
7	41.000	17.333	20.333	27.667	31.333	19.667	25.667	30.333	18.667	10.000
8	41.000	26.333	15.000	33.667	18.667	12.667	29.333	11.000	11.000	26.000
Mean	34.000	28.458	24.000	24.792	18.583	28.625	25.875	22.625	19.500	16.375
SD	12.054	14.138	13.674	9.681	8.739	15.400	11.305	13.170	9.659	9.221

	APP/PS1-FA		Day 1			Day 2				
	1	2	3	4	5	6	7	8	9	10
1	32.333	20.000	20.000	35.333	20.000	22.333	26.333	21.667	27.000	23.667
2	25.667	23.000	14.333	17.333	28.333	23.667	23.667	27.333	22.333	18.333
3	45.667	30.333	47.667	24.000	18.667	37.333	29.000	32.333	31.333	24.000
4	35.667	28.000	21.667	27.667	10.333	36.333	24.333	8.333	13.667	13.000
5	28.000	15.000	8.667	5.333	16.333	16.000	10.000	14.000	9.333	7.000
6	40.333	35.667	30.333	20.000	23.333	18.667	17.000	20.667	7.000	25.667
7	26.333	38.667	20.667	44.000	37.333	38.667	38.333	34.667	31.000	31.667
8	31.000	30.000	35.667	15.667	17.000	30.000	16.667	10.667	23.333	12.000
Mean	33.125	27.583	24.875	23.667	21.417	27.875	23.167	21.208	20.625	19.417
SD	7.060	7.916	12.486	12.067	8.303	8.914	8.696	9.796	9.523	8.278

	APP/PS1-EGCG/FA		Day 1			Day 2				
	1	2	3	4	5	6	7	8	9	10
1	10.667	13.000	35.333	14.333	6.667	28.667	8.667	5.667	20.000	13.333
2	17.333	11.667	11.333	14.667	6.333	22.667	12.333	11.333	17.000	14.667
3	30.000	11.667	11.333	11.333	10.000	18.333	10.000	19.000	27.333	16.667
4	25.667	23.000	11.667	36.333	9.333	22.333	27.333	22.333	29.333	26.000
5	18.333	14.000	27.667	13.333	23.667	18.667	20.667	5.667	5.000	5.333
6	47.333	43.333	36.333	17.667	26.333	21.000	29.333	26.000	7.667	22.667
7	53.333	42.000	33.667	35.000	24.333	55.667	44.333	46.333	26.333	15.667
8	45.333	51.000	39.667	33.333	40.333	27.333	19.333	24.667	12.000	10.667
Mean	31.000	26.208	25.875	22.000	18.375	26.833	21.500	20.125	18.083	15.625
SD	15.862	16.536	12.408	10.844	12.206	12.222	11.971	13.328	9.271	6.492

Table S5 (Supporting information of Figure 1D left)

Escape latency (s)**WT-V**

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	28.000	15.000	22.667	17.667	17.667	19.000	19.333	10.000	16.667	14.667
2	22.333	14.000	15.000	18.667	19.667	34.000	14.333	15.667	22.333	10.333
3	33.667	38.000	21.000	19.667	27.333	37.000	44.333	24.667	23.667	25.333
4	20.000	57.000	19.667	17.333	19.000	21.333	19.667	33.000	30.333	30.333
5	15.333	21.333	18.333	9.667	19.000	38.000	16.333	27.667	12.667	12.667
6	41.667	37.000	28.333	13.667	7.000	16.667	20.333	11.667	10.333	11.000
7	48.000	17.667	48.333	33.000	22.333	26.333	30.667	38.667	20.333	18.667
8	33.333	15.333	19.000	22.667	26.667	17.667	15.667	17.333	22.333	19.000
Mean	30.292	26.917	24.042	19.042	19.833	26.250	22.583	22.333	19.833	17.750
SD	11.096	15.535	10.546	6.867	6.325	8.912	10.124	10.349	6.429	7.113

WT-EGCG

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	26.667	21.000	18.000	33.667	14.667	36.333	24.667	22.333	17.333	24.333
2	30.667	44.667	20.333	22.333	22.000	20.667	28.667	17.000	23.667	18.667
3	46.333	32.000	46.333	24.333	28.333	34.333	44.333	39.000	34.667	42.000
4	23.667	27.333	23.333	31.667	27.333	35.667	27.000	27.333	11.000	21.667
5	32.667	17.667	15.000	14.000	20.000	17.000	18.667	17.333	11.667	7.333
6	26.000	25.667	22.333	14.333	22.667	26.667	16.667	14.667	18.000	11.000
7	26.000	19.000	9.667	15.000	11.667	21.667	15.667	16.000	9.667	13.000
8	33.000	14.667	12.667	28.333	27.000	21.667	19.000	20.000	23.000	11.667
Mean	30.625	25.250	20.958	22.958	21.708	26.750	24.333	21.708	18.625	18.708
SD	7.205	9.664	11.290	7.925	6.070	7.678	9.415	8.084	8.373	11.045

WT-FA

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	23.000	15.333	12.333	13.667	5.667	22.000	15.000	25.667	11.333	9.000
2	36.000	25.000	36.667	16.333	39.000	33.000	32.000	27.333	18.000	25.333
3	32.333	15.000	19.667	18.000	8.667	18.000	15.000	14.333	11.333	8.667
4	19.000	14.000	26.000	8.000	15.333	20.333	10.333	17.000	16.667	24.333
5	30.667	30.000	9.000	19.000	23.000	16.667	13.000	16.333	16.333	6.000
6	45.667	30.667	27.333	28.333	25.667	33.000	38.333	24.667	23.000	20.333
7	54.333	47.667	27.000	30.000	24.333	43.000	18.333	19.667	23.333	17.000
8	13.667	27.333	19.667	26.667	20.333	33.333	24.333	30.000	28.333	30.667
Mean	31.833	25.625	22.208	20.000	20.250	27.417	20.792	21.875	18.542	17.667
SD	13.572	11.261	8.925	7.713	10.530	9.441	9.922	5.784	5.992	9.040

WT-EGCG/FA

	Day 1					Day 2				
	1	2	3	4	5	6	7	8	9	10
1	23.667	24.333	20.333	23.667	15.667	26.000	35.000	21.000	36.667	8.667
2	27.333	21.667	10.000	25.000	9.333	27.333	20.333	22.000	10.667	11.667
3	23.333	17.000	9.000	8.333	10.333	12.000	12.333	7.333	9.000	11.667
4	21.333	39.667	24.333	15.667	17.000	38.333	34.000	36.000	21.667	33.333
5	42.667	25.000	19.000	14.333	21.000	21.667	9.333	14.667	10.000	19.667
6	41.000	20.333	26.000	26.333	26.000	16.667	27.667	17.000	28.667	12.000
7	29.333	28.000	45.667	22.667	29.000	41.333	12.667	17.000	18.667	35.000
8	35.000	18.000	12.667	16.000	23.000	23.000	23.000	30.000	10.667	10.667
Mean	30.458	24.250	20.875	19.000	18.917	25.792	21.792	20.625	18.250	17.833
SD	8.211	7.230	11.852	6.332	7.097	9.997	9.925	8.982	10.199	10.582

< 25 μm

APP/PS1-V

	RSC	H	EC
1	368	238	301
2	391	371	257
3	383	259	247
4	296	257	249
5	362	313	331
6	242	338	397
7	268	325	316
8	394	308	403
Mean	338.000	301.125	312.625
SD	60.150	45.836	62.358

APP/PS1-EGCG

	RSC	H	EC
1	193	180	186
2	226	168	210
3	189	217	138
4	222	250	162
5	251	222	221
6	204	240	278
7	235	218	241
8	285	184	284
Mean	225.625	209.875	215.000
SD	31.946	29.512	52.162

APP/PS1-FA

	RSC	H	EC
1	284	214	196
2	181	226	122
3	237	198	164
4	257	282	231
5	261	194	252
6	223	221	233
7	290	225	278
8	293	283	242
Mean	253.250	230.375	214.750
SD	38.451	34.247	51.071

APP/PS1-EGCG/FA

	RSC	H	EC
1	204	167	131
2	229	158	162
3	204	152	162
4	208	178	152
5	148	198	125
6	253	165	216
7	133	166	170
8	164	158	183
Mean	192.875	167.750	162.625
SD	41.108	14.489	28.903

25-50 μm **APP/PS1-V**

	RSC	H	EC
1	147	105	106
2	165	112	99
3	135	123	103
4	122	96	114
5	160	106	135
6	119	130	173
7	104	96	147
8	231	142	185
Mean	147.875	113.750	132.750
SD	39.542	16.551	33.057

APP/PS1-EGCG

	RSC	H	EC
1	61	82	83
2	107	89	91
3	97	89	77
4	101	104	72
5	87	92	93
6	81	80	98
7	98	65	103
8	106	82	100
Mean	92.250	85.375	89.625
SD	15.443	11.237	11.237

APP/PS1-FA

	RSC	H	EC
1	80	80	69
2	62	89	72
3	89	72	66
4	106	101	80
5	110	67	94
6	79	82	96
7	102	84	81
8	116	100	102
Mean	93.000	84.375	82.500
SD	18.555	12.082	13.459

APP/PS1-EGCG/FA

	RSC	H	EC
1	83	56	37
2	77	72	80
3	83	56	66
4	58	58	54
5	50	71	44
6	58	81	70
7	59	67	66
8	54	61	64
Mean	65.250	65.250	60.125
SD	13.477	9.036	14.187

> 50 μ m

APP/PS1-V

	RSC	H	EC
1	63	30	29
2	39	56	52
3	42	70	38
4	34	42	30
5	50	70	45
6	39	40	51
7	57	62	56
8	74	62	54
Mean	49.750	54.000	44.375
SD	13.916	14.928	10.783

APP/PS1-EGCG

	RSC	H	EC
1	27	26	20
2	21	32	23
3	20	25	30
4	38	27	29
5	33	44	35
6	28	45	25
7	30	40	37
8	43	36	30
Mean	30.000	34.375	28.625
SD	7.892	8.088	5.780

APP/PS1-FA

	RSC	H	EC
1	29	30	22
2	25	26	24
3	31	33	22
4	29	31	26
5	34	32	22
6	25	38	34
7	33	42	42
8	44	46	27
Mean	31.250	34.750	27.375
SD	6.112	6.692	7.150

APP/PS1-EGCG/FA

	RSC	H	EC
1	26	21	14
2	20	21	14
3	15	29	13
4	14	27	11
5	17	22	13
6	25	29	18
7	18	21	21
8	19	23	20
Mean	19.250	24.125	15.500
SD	4.334	3.603	3.665

APP/PS1-V

	RSC	H	EC
1	8.4	11.0	8.2
2	9.4	8.6	8.8
3	12.8	11.0	10.6
4	9.4	11.2	7.6
5	12.2	13.6	9.8
6	8.8	10.2	7.8
7	9.0	11.2	10.8
8	10.6	9.4	8.2
Mean	10.075	10.775	8.975
SD	1.635	1.483	1.262

APP/PS1-EGCG

	RSC	H	EC
1	7.8	8.4	6.0
2	6.8	8.2	6.8
3	6.4	8.0	5.4
4	6.8	9.8	6.6
5	6.6	9.2	5.2
6	8.0	8.0	6.6
7	6.4	8.2	6.4
8	8.2	10.6	7.0
Mean	7.125	8.800	6.250
SD	0.748	0.968	0.657

APP/PS1-FA

	RSC	H	EC
1	6.2	8.2	6.8
2	7.6	7.2	5.4
3	6.4	10.6	7.4
4	8.6	9.6	6.6
5	7.0	8.4	5.8
6	8.6	10.4	7.0
7	6.2	8.8	7.4
8	7.4	8.6	6.4
Mean	7.250	8.975	6.600
SD	0.984	1.154	0.717

APP/PS1-EGCG/FA

	RSC	H	EC
1	6.6	8.2	5.6
2	5.2	5.6	4.2
3	5.2	6.4	4.8
4	6.6	6.6	4.8
5	5.2	5.4	4.6
6	7.0	7.8	6.2
7	5.8	7.0	4.8
8	5.8	6.6	5.0
Mean	5.925	6.700	5.000
SD	0.725	0.968	0.623

sAPP-α/APP ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.923	0.938	0.924	0.946	0.925	0.947	0.932	0.940	0.934	0.010
APP/PS1-EGCG	0.993	0.998	0.991	1.002	0.994	1.001	0.994	0.988	0.995	0.005
APP/PS1-FA	0.942	0.939	0.937	0.948	0.941	0.944	0.933	0.947	0.941	0.005
APP/PS1-EGCG/FA	0.998	1.000	1.003	0.993	0.995	0.996	0.992	0.996	0.997	0.004
sAPP-β/APP ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.964	0.959	0.966	0.947	0.960	0.958	0.964	0.951	0.959	0.007
APP/PS1-EGCG	0.866	0.867	0.874	0.864	0.854	0.877	0.854	0.862	0.865	0.008
APP/PS1-FA	0.756	0.777	0.765	0.754	0.779	0.752	0.771	0.754	0.764	0.011
APP/PS1-EGCG/FA	0.699	0.726	0.708	0.709	0.704	0.705	0.710	0.723	0.710	0.009
P-C99/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.942	0.964	0.933	0.956	0.934	0.971	0.935	0.973	0.951	0.017
APP/PS1-EGCG	0.817	0.782	0.815	0.777	0.825	0.776	0.825	0.771	0.799	0.024
APP/PS1-FA	0.832	0.777	0.834	0.774	0.820	0.784	0.825	0.774	0.803	0.027
APP/PS1-EGCG/FA	0.726	0.567	0.722	0.569	0.718	0.560	0.725	0.569	0.644	0.084
C99/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.940	0.962	0.930	0.953	0.931	0.955	0.933	0.958	0.945	0.013
APP/PS1-EGCG	0.812	0.777	0.815	0.772	0.815	0.771	0.824	0.766	0.794	0.025
APP/PS1-FA	0.833	0.773	0.825	0.770	0.825	0.780	0.799	0.770	0.797	0.027
APP/PS1-EGCG/FA	0.721	0.557	0.716	0.559	0.713	0.555	0.719	0.564	0.638	0.085

Table S11 (Supporting information of Figure 5B-D)

pADAM10 (upper)/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.627	0.538	0.627	0.535	0.624	0.534	0.623	0.535	0.581	0.048
APP/PS1-EGCG	0.915	0.964	0.913	0.963	0.923	0.962	0.911	0.962	0.939	0.025
APP/PS1-FA	0.351	0.612	0.355	0.610	0.349	0.618	0.349	0.611	0.482	0.140
APP/PS1-EGCG/FA	0.843	0.946	0.844	0.937	0.842	0.938	0.846	0.945	0.893	0.052
pADAM10 (lower)/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.783	0.742	0.778	0.744	0.786	0.744	0.787	0.743	0.763	0.022
APP/PS1-EGCG	0.983	1.019	0.981	1.019	0.979	1.016	0.981	1.016	0.999	0.019
APP/PS1-FA	0.677	0.796	0.677	0.796	0.677	0.788	0.677	0.793	0.735	0.062
APP/PS1-EGCG/FA	0.974	1.002	0.972	1.004	0.970	1.006	0.967	1.000	0.987	0.017
mADAM10 (upper)/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.984	0.966	0.985	0.966	0.987	0.965	0.986	0.968	0.976	0.010
APP/PS1-EGCG	1.049	1.043	1.053	1.048	1.050	1.048	1.052	1.046	1.049	0.003
APP/PS1-FA	0.987	0.982	0.987	0.980	0.984	0.979	0.989	0.981	0.984	0.004
APP/PS1-EGCG/FA	1.053	1.062	1.053	1.064	1.048	1.062	1.049	1.058	1.056	0.006
mADAM10 (lower)/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.850	0.862	0.850	0.861	0.850	0.859	0.851	0.861	0.856	0.006
APP/PS1-EGCG	0.966	0.936	0.966	0.935	0.958	0.939	0.981	0.938	0.952	0.017
APP/PS1-FA	0.863	0.803	0.866	0.802	0.866	0.797	0.864	0.795	0.832	0.035
APP/PS1-EGCG/FA	1.010	0.975	1.007	0.971	1.009	0.974	1.011	0.974	0.991	0.019
BACE1/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	1.012	1.027	1.013	1.025	1.011	1.023	1.012	1.022	1.018	0.007
APP/PS1-EGCG	0.979	1.001	0.978	0.999	0.977	0.997	0.975	1.000	0.988	0.012
APP/PS1-FA	0.963	0.985	0.963	0.987	0.962	0.982	0.967	0.992	0.975	0.012
APP/PS1-EGCG/FA	0.952	0.922	0.951	0.920	0.950	0.924	0.951	0.918	0.936	0.016

Table S12 (Supporting information of Figure 6B-D)

APP/PS1-V			APP/PS1-EGCG			WT-EGCG			WT-FA		
	TNF-α	IL-1β		TNF-α	IL-1β		TNF-α	IL-1β		TNF-α	IL-1β
1	2.956	2.737	1	1.879	1.906	1	1.447	1.041	1	1.199	1.188
2	2.696	2.087	2	1.286	1.717	2	1.142	0.968	2	0.759	1.030
3	2.367	2.648	3	1.406	2.012	3	0.344	0.578	3	1.490	0.831
4	2.259	2.441	4	1.461	1.859	4	1.297	1.306	4	0.888	0.962
5	1.930	2.205	5	2.073	1.174	5	0.921	0.655	5	0.572	0.971
6	2.097	3.126	6	2.188	1.365	6	1.320	0.995	6	0.971	0.693
7	2.489	2.379	7	2.144	1.813	7	0.571	1.007	7	1.080	1.517
8	2.692	2.708	8	1.959	2.367	8	1.014	1.596	8	0.847	0.403
Mean	2.436	2.541	Mean	1.800	1.777	Mean	1.007	1.018	Mean	0.976	0.949
SD	0.341	0.333	SD	0.360	0.371	SD	0.384	0.326	SD	0.283	0.330

APP/PS1-FA			APP/PS1-EGCG/FA			WT-EGCG/FA		
	TNF-α	IL-1β		TNF-α	IL-1β		TNF-α	IL-1β
1	1.811	1.721	1	0.912	1.170	1	0.779	0.907
2	1.158	1.484	2	1.489	1.533	2	0.622	0.671
3	2.122	1.990	3	0.710	1.303	3	0.634	0.922
4	2.541	1.891	4	1.835	0.836	4	1.451	1.206
5	1.728	2.505	5	1.283	1.608	5	1.311	1.176
6	1.893	2.241	6	1.203	0.983	6	0.772	0.595
7	2.063	1.365	7	1.435	1.634	7	1.116	0.870
8	1.547	1.513	8	0.983	0.611	8	1.046	1.533
Mean	1.858	1.839	Mean	1.231	1.210	Mean	0.966	0.985
SD	0.411	0.397	SD	0.361	0.378	SD	0.313	0.307

APP/PS1-V			APP/PS1-EGCG			WT-EGCG			WT-FA		
	SOD1	GPx1		SOD1	GPx1		SOD1	GPx1		SOD1	GPx1
1	1.592	1.684	1	1.541	1.652	1	1.059	1.203	1	1.060	1.138
2	1.680	1.798	2	1.224	1.447	2	0.751	0.780	2	1.099	1.164
3	1.401	1.706	3	1.486	1.170	3	0.913	0.998	3	0.806	1.362
4	1.953	1.894	4	1.083	1.552	4	1.025	0.975	4	1.004	0.982
5	1.062	1.318	5	1.092	1.252	5	1.138	1.035	5	1.135	0.920
6	1.745	1.798	6	1.097	1.177	6	1.018	1.060	6	1.055	1.009
7	1.478	1.595	7	1.147	1.277	7	1.036	1.055	7	1.089	1.147
8	1.438	1.845	8	1.280	1.200	8	0.989	0.960	8	0.933	0.723
Mean	1.544	1.705	Mean	1.244	1.341	Mean	0.991	1.008	Mean	1.023	1.056
SD	0.266	0.183	SD	0.181	0.185	SD	0.116	0.119	SD	0.107	0.192

APP/PS1-FA			APP/PS1-EGCG/FA			WT-EGCG/FA		
	SOD1	GPx1		SOD1	GPx1		SOD1	GPx1
1	1.314	1.644	1	0.789	1.004	1	0.949	0.689
2	1.004	1.195	2	0.879	1.223	2	1.156	0.794
3	1.100	1.322	3	1.099	0.999	3	1.045	1.132
4	1.081	1.291	4	1.066	0.939	4	1.196	1.153
5	1.461	1.412	5	0.923	0.901	5	0.972	1.087
6	1.246	1.428	6	0.932	1.016	6	0.879	1.013
7	1.354	1.201	7	1.026	1.208	7	0.810	1.003
8	1.545	1.142	8	1.068	1.133	8	0.960	1.359
Mean	1.263	1.329	Mean	0.973	1.053	Mean	0.996	1.029
SD	0.192	0.163	SD	0.109	0.121	SD	0.131	0.210

Table S13 (Supporting information of Figure 9A and B)

SOD1/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.960	0.963	0.966	0.969	0.950	0.957	0.951	0.959	0.959	0.007
APP/PS1-EGCG	0.876	0.877	0.883	0.890	0.885	0.886	0.889	0.893	0.885	0.006
APP/PS1-FA	0.877	0.881	0.874	0.870	0.887	0.888	0.883	0.875	0.879	0.006
APP/PS1-EGCG/FA	0.773	0.763	0.771	0.751	0.778	0.759	0.776	0.758	0.766	0.010
GPx1/actin ratio	1	2	3	4	5	6	7	8	Mean	SD
APP/PS1-V	0.961	0.965	0.964	0.965	0.968	0.968	0.967	0.969	0.966	0.003
APP/PS1-EGCG	0.921	0.923	0.918	0.920	0.912	0.910	0.919	0.910	0.917	0.005
APP/PS1-FA	0.930	0.918	0.930	0.917	0.928	0.924	0.927	0.918	0.924	0.005
APP/PS1-EGCG/FA	0.865	0.853	0.869	0.848	0.871	0.849	0.865	0.859	0.860	0.009

Table S14 (Supporting information of Figure 9D and E)

APP/PS1-V			APP/PS1-EGCG		
	CA1	EC		CA1	EC
1	125.502	127.880	1	129.117	130.512
2	125.221	126.229	2	129.414	130.276
3	125.275	126.294	3	129.015	129.928
4	126.673	126.729	4	128.615	129.273
5	127.323	127.767	5	128.125	128.544
6	124.746	127.000	6	128.052	129.564
7	126.546	125.177	7	130.110	130.663
8	124.478	127.506	8	130.354	131.760
Mean	125.721	126.823	Mean	129.100	130.065
SD	1.010	0.915	SD	0.844	0.977

APP/PS1-FA			APP/PS1-EGCG/FA		
	CA1	EC		CA1	EC
1	128.303	130.515	1	131.713	132.766
2	129.158	128.522	2	129.491	130.671
3	128.801	130.079	3	130.521	130.860
4	128.619	129.885	4	129.423	131.856
5	129.486	131.063	5	129.886	130.744
6	129.077	129.406	6	131.020	130.619
7	127.220	129.191	7	131.927	133.000
8	129.798	129.645	8	131.563	133.342
Mean	128.808	129.788	Mean	130.693	131.732
SD	0.797	0.790	SD	1.012	1.158