

Table S1 Information of 112 studies included in this study

Number	Study	Task	Modality	N [female]	Age (SD/mean)	Tesla (T)
Reward						
1	Grabenhorst <i>et al.</i> [2010]	Thermal and taste reward	fMRI	14 [5]	Mean =24	3
2	Ramnani <i>et al.</i> [2003]	Monetary reward	fMRI	8 [0]	–	3
3	Spreckelmeyer <i>et al.</i> [2009]	Monetary and social reward	fMRI	32 [16]	20–53 (mean =28.9)	1.5
4	Abler <i>et al.</i> [2006]	Monetary reward	fMRI	11 [0]	22–36	3
5	Camara <i>et al.</i> [2009]	Monetary reward	fMRI	17 [10]	2.6/21.6	3
6	Cox <i>et al.</i> [2005]	Monetary reward	fMRI	22 [10]	18–30	3
7	Elliott <i>et al.</i> [2008]	Monetary reward	fMRI	12 [0]	Mean =30.3	1.5
8	Knutson <i>et al.</i> [2005]	Monetary reward	fMRI	14 [8]	Mean =22	1.5
9	Knutson <i>et al.</i> [2001]	Monetary reward	fMRI	8 [4]	Mean =31	1.5
10	Knutson <i>et al.</i> [2003]	Monetary reward	fMRI	12 [6]	Mean =31	1.5
11	Knutson <i>et al.</i> [2008]	Monetary reward	fMRI	15 [0]	2.12/20.73	1.5
12	Knutson <i>et al.</i> [2001]	Monetary reward	fMRI	9 [7]	–	1.5
13	Elliott <i>et al.</i> [2004]	Monetary reward	fMRI	12 [6]	Mean =23.6	1.5
14	Elliott <i>et al.</i> [2003]	Monetary reward	fMRI	12 [6]	Mean =23.6	1.5
15	Bjork <i>et al.</i> [2007]	Monetary reward	fMRI	20 [10]	6.4/34.1	3
16	Valentin <i>et al.</i> [2009]	Juice and monetary reward	fMRI	17 [5]	19–40 (1.7/25)	3
17	Smith <i>et al.</i> [2010]	Monetary reward	fMRI	23 [0]	18–28 (mean =21.8)	3
18	Dreher <i>et al.</i> [2006]	Monetary reward	fMRI	31 [15]	5.7/27.6	3
19	Izuma <i>et al.</i> [2008]	Monetary reward	fMRI	19 [10]	Mean =21.6	3
20	Kirsch <i>et al.</i> [2003]	Language and monetary reward	fMRI	27 [4]	Mean =23.36	1.5
21	Linke <i>et al.</i> [2010]	Monetary reward	fMRI	33 [16]	19–32 (2.92/22.6)	3
22	Liu <i>et al.</i> [2007]	Monetary reward	fMRI	15 [9]	18–45 (mean =26)	3
23	Nieuwenhuis <i>et al.</i> [2005]	Monetary reward	fMRI	14 [6]	22–31 (mean =25.4)	1.5
24	Yacubian <i>et al.</i> [2006]	Monetary reward	fMRI	42 [0]	5.5/27.3	3
25	Zink <i>et al.</i> [2004]	Monetary reward	fMRI	16 [6]	18–32	3
26	Wrase <i>et al.</i> [2007]	Monetary reward	fMRI	14 [0]	10.3/39.9	1.5
27	Ernst <i>et al.</i> [2004]	Monetary reward	fMRI	17 [0]	20–40	3
28	Rilling <i>et al.</i> [2004]	Monetary reward	fMRI	19 [11]	7.8/21.8	3
29	Koeneke <i>et al.</i> [2008]	Personal preference reward	fMRI	19 [19]	2.63/24.05	3
Memory						
1	Foerde <i>et al.</i> [2006]	Declarative memory	fMRI	14 [9]	18–45 (6.53/25.71)	3
2	Bedwell <i>et al.</i> [2005]	Working memory	fMRI	14 [6]	22–40 (5.8/29.2)	1.5
3	Cabeza <i>et al.</i> [2002]	Episodic and working memory	fMRI	20 [7]	3.68/22.6	–
4	Lie <i>et al.</i> [2006]	Working memory	fMRI	12 [2]	19–36 (5/24)	1.5
5	Fliessbach <i>et al.</i> [2006]	Vocabulary memory	fMRI	21 [12]	19–43 (6.2/27.4)	1.5
6	Adcock <i>et al.</i> [2006]	Reward memory	fMRI	12 [3]	18–35	3
7	Sailer <i>et al.</i> [2007]	Working memory	fMRI	38 [38]	21.4–40.6 (mean =26.4)	3
8	Assaf <i>et al.</i> [2006]	Semantic memory	fMRI	18 [7]	21–73 (15/40.8)	3
9	Daselaar <i>et al.</i> [2006]	Vocabulary memory	fMRI	14 [6]	2.4/21.4	4
10	Sommer <i>et al.</i> [2008]	Emotional memory	fMRI	17 [17]	Mean =27.4	3
11	Ritchey <i>et al.</i> [2008]	Emotional memory	fMRI	13 [7]	3.4/22.6	4
12	Gruber <i>et al.</i> [2003]	Working memory	fMRI	13 [5]	3.5/24.9	3
13	Prince <i>et al.</i> [2005]	Vocabulary and perceptual memory	fMRI	16 [5]	1.7/19.8	4
14	Altamura <i>et al.</i> [2007]	Working memory	fMRI	18 [7]	Mean =27.4	3
15	Nee <i>et al.</i> [2009]	Selective memory	fMRI	18 [8]	18–25	3
16	Cairo <i>et al.</i> [2004]	Working memory	fMRI	18 [10]	18–35 (mean =27.5)	1.5
17	Addis <i>et al.</i> [2007]	Episodic memory	fMRI	16 [9]	18–33 (mean =23)	3
18	Postle <i>et al.</i> [2007]	Working memory	fMRI	12 [7]	4.2/22.8	3
19	Peters <i>et al.</i> [2007]	Source memory	fMRI	15 [7]	20–35 (mean =25)	1.5
20	Clapp <i>et al.</i> [2010]	Working memory	fMRI	22 [9]	18–32 (mean =24.57)	3
21	Dennis <i>et al.</i> [2011]	Learning memory	fMRI	12 [4]	18–30 (3.5/22.2)	4
22	Gutchess <i>et al.</i> [2012]	Confirmatory memory	fMRI	16 [8]	19–33 (4.57/24.13)	1.5
23	Kensinger <i>et al.</i> [2005]	Precise and distorted memory	fMRI	16 [8]	18–30	1.5
24	Marvel <i>et al.</i> [2012]	Working memory	fMRI	16 [8]	14–18	3
25	Mickley <i>et al.</i> [2009]	Emotional memory	fMRI	19 [8]	18–35	1.5
26	de Rover <i>et al.</i> [2008]	Spatial location memory	fMRI	20 [10]	19–33 (4/25)	1.5
Emotion						
1	Wehrum <i>et al.</i> [2013]	Emotional pictures	fMRI	100 [50]	Mean =25	1.5
2	Roth <i>et al.</i> [2014]	Shame and pride emotions	fMRI	25	18–50 (mean =34)	3
3	Kotz <i>et al.</i> [2003]	Semantic emotions	fMRI	12 [8]	22–29 (mean =24)	3
4	Meseguer <i>et al.</i> [2007]	Positive and negative pictures	fMRI	14	Mean =28.8	3
5	Baumgartner <i>et al.</i> [2006]	Fear and sadness emotions	fMRI	9 [9]	21–30 (2.9/24.7)	3
6	Goldin <i>et al.</i> [2008]	Neutral and negative movies	fMRI	17 [17]	3.5/22.7	3
7	Hutcherson <i>et al.</i> [2008]	Happiness and sorrow movies	fMRI	28 [28]	18–21	3
8	Walter <i>et al.</i> [2008]	Neutral, pleasurable and sexual pictures	fMRI	21 [10]	21–36 (mean =24.8)	1.5
9	Britton <i>et al.</i> [2006]	Disgusted, happy, sad pictures and movies	fMRI	12 [6]	19–29 (mean =23.6)	3
10	Fitzgerald <i>et al.</i> [2004]	Aversion emotions	fMRI	12 [5]	22–53 (mean =31.2)	1.5
11	Trost <i>et al.</i> [2012]	Positive and negative music	fMRI	15 [7]	Mean =28.8	3
12	Phillips <i>et al.</i> [2004]	Fear and disgust facial pictures	fMRI	8 [0]	25–36 (mean =32)	1.5
13	Mueller <i>et al.</i> [2015]	Pleasant and unpleasant music	fMRI	23 [13]	2.9/25.9	3
14	Butler <i>et al.</i> [2007]	Fear emotions	fMRI	42 [16]	Mean =28	3
15	Schiller <i>et al.</i> [2008]	Fear emotions	fMRI	17 [8]	18–31	3
16	Trost <i>et al.</i> [2014]	Pleasant music	fMRI	20 [13]	7.5/25.8	3
17	Herwig <i>et al.</i> [2007]	Positive, negative and neutral pictures	fMRI	16 [10]	23–36	1.5
18	Bogert <i>et al.</i> [2016]	Pleasant, fear and sadness music	fMRI	56 [34]	20–53 (mean =28.2)	3
19	Brattico <i>et al.</i> [2011]	Pleasant and sadness music	fMRI	15 [6]	2.9/23.9	3
20	Lutz <i>et al.</i> [2014]	Negative pictures	fMRI	49 [32]	20–57 (7.96/29.98)	3
21	Mobbs <i>et al.</i> [2007]	Fear emotions	fMRI	14	Mean =26	–
22	Grimm <i>et al.</i> [2006]	Emotional pictures	fMRI	29 [21]	20–27	1.5
23	Osaka <i>et al.</i> [2004]	Pain emotions	fMRI	20 [11]	20–27	1.5
24	Rolls <i>et al.</i> [2003]	Pleasant and unpleasant smells	fMRI	11 [6]	–	3
25	Wagner <i>et al.</i> [2011]	Shame and sorrow emotions	fMRI	18 [18]	25–30 (mean =27.5)	3
26	Maddock <i>et al.</i> [2003]	Emotional vocabulary	fMRI	8 [6]	24–45	1.5
27	Morris <i>et al.</i> [2004]	Fear and disgust facial pictures	fMRI	12	–	2
28	Morris <i>et al.</i> [2001]	Fear facial pictures	fMRI	6 [2]	Mean =29.3	2
29	Lee <i>et al.</i> [2008]	Emotional facial pictures	fMRI	14 [7]	Mean =23.8	–
30	de Gelder <i>et al.</i> [2004]	Pleasant and fear emotions	fMRI	7 [3]	–	3
31	Viinikainen <i>et al.</i> [2010]	Emotional pictures	fMRI	17 [9]	21–26 (mean =23)	3
Decision-making						
1	Robertson <i>et al.</i> [2015]	Rewarding decision-making	fMRI	16 [8]	19–27 (mean =23)	3
2	Xu <i>et al.</i> [2009]	Intertemporal decision-making	fMRI	20 [10]	22–29 (mean =25)	3
3	Ernst <i>et al.</i> [2004]	Economic decision-making	fMRI	17 [7]	Mean =24	3
4	Hsu <i>et al.</i> [2005]	Risky decision-making	fMRI	16 [3]	Mean =24	–
5	Kuhnen <i>et al.</i> [2005]	Risky decision-making	fMRI	19 [10]	24–39 (mean =27)	1.5
6	Matthews <i>et al.</i> [2004]	Risky decision-making	fMRI	12 [5]	20–56 (mean =34)	1.5
7	Peters <i>et al.</i> [2009]	Intertemporal and risky decision-making	fMRI	22 [14]	Mean =26.3	3
8	Weber <i>et al.</i> [2008]	Intertemporal decision-making	fMRI	23 [11]	19–36 (mean =23)	3
9	Schonberg <i>et al.</i> [2007]	Rewarding decision-making	fMRI	29 [15]	22–39 (mean =27.4)	3
10	Engelmann <i>et al.</i> [2009]	Risky decision-making	fMRI	10 [3]	–	3
11	Knutson <i>et al.</i> [2007]	Economic decision-making	fMRI	26 [12]	18–26	1.5
12	Knutson <i>et al.</i> [2008]	Economic decision-making	fMRI	24 [12]	–	1.5
13	Glascher <i>et al.</i> [2009]	Rewarding decision-making	fMRI	20 [9]	4.7/22.3	3
14	Guitart-Masip <i>et al.</i> [2010]	Economic decision-making	fMRI	21 [12]	Mean =22.2	3
15	Kim <i>et al.</i> [2007]	Preference decision-making	fMRI	25 [12]	18–45 (mean =26.67)	3
16	Wunderlich <i>et al.</i> [2009]	Action decision-making	fMRI	23 [10]	18–29	3
17	Daw <i>et al.</i> [2006]	Exploratory decision-making	fMRI	14	–	1.5
18	Bickel <i>et al.</i> [2009]	Intertemporal decision-making	fMRI	30 [21]	20–67 (mean =47.1)	3
19	Hare <i>et al.</i> [2010]	Economic decision-making	fMRI	22 [22]	19–38 (mean =24.7)	3
20	Engelmann <i>et al.</i> [2009]	Economic decision-making	fMRI	24 [15]	5.3/23	3
21	Hampton <i>et al.</i> [2006]	Economic decision-making	fMRI	16 [8]	–	3
22	Han <i>et al.</i> [2010]	Economic decision-making	fMRI	20 [11]	20–33 (mean =24)	3
23	Venkatraman <i>et al.</i> [2009]	Risky decision-making	fMRI	23 [13]	18–31 (mean =24)	4
24	Milea <i>et al.</i> [2007]	Action decision-making	fMRI	12 [5]	21–30	–
25	Mitchell <i>et al.</i> [2009]	Economic decision-making	fMRI	19 [10]	21–50 (8.6/26.9)	1.5
26	Hsu <i>et al.</i> [2009]	Risky decision-making	fMRI	21 [11]	7.5/29.6	3

Table S2 Activation results under reward task

Cluster #	Volume mm ³	MNI peak coordinate			ALE value	P	Z	Brain region
		x	y	z				
1	51,624	12	12	-4	0.085461	1.71E-28	11.011578	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
1		-12	10	-4	0.0740147	1.42E-23	9.939302	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		4	-16	10	0.0343764	4.34E-09	5.7546177	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		14	-2	12	0.0298301	1.06E-07	5.188899	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		26	0	-14	0.0294915	1.33E-07	5.1454453	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		34	26	-6	0.0288801	2.02E-07	5.0669394	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-10	2	12	0.026592	9.38E-07	4.766418	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		6	0	4	0.0253368	2.13E-06	4.598657	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-26	4	4	0.0243451	4.02E-06	4.4640765	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-30	20	2	0.0240799	4.78E-06	4.4269295	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		0	-6	8	0.023421	7.27E-06	4.335625	Inter-Hemispheric.Sub-lobar.Extra-Nuclear.White Matter.*
1		-12	-4	16	0.0217216	2.11E-05	4.0952435	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		34	22	4	0.020883	3.54E-05	3.9734282	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		30	-8	-22	0.0155539	7.94E-04	3.1580386	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Amygdala
1		18	-12	-2	0.01441690	0.0014909	2.9696052	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2	4,632	2	2	48	0.0287465	2.21E-07	5.050114	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
2		-6	6	46	0.0178268	2.18E-04	3.5172672	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.White Matter.*
2		-12	-6	54	0.0133941	0.0026139	2.792648	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
3	3,928	2	48	-8	0.0376731	3.94E-10	6.1474676	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.*
4	3,456	4	30	32	0.0231753	8.46E-06	4.302167	Right Cerebrum.Frontal Lobe.Cingulate Gyrus.*.*
4		4	18	36	0.0153826	8.74E-04	3.1301777	Right Cerebrum.Frontal Lobe.Cingulate Gyrus.*.*
4		6	40	38	0.01509780	0.0010214	3.0839334	Right Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 8
5	1,920	-2	-20	-14	0.0159901	6.21E-04	3.2292047	Left Brainstem.Midbrain.*.*.*
5		4	-22	-14	0.0154599	8.35E-04	3.143327	Right Brainstem.Midbrain.*.*.*
6	1,176	-20	36	-18	0.0210937	3.11E-05	4.0040236	Left Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
6		-18	42	-18	0.0201426	5.56E-05	3.8646536	Left Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
7	1,072	-38	-14	52	0.0222716	1.50E-05	4.1739006	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter.Brodmann area 4
8	1,024	4	-50	18	0.0234273	7.22E-06	4.3370113	Right Cerebrum.Limbic Lobe.Posterior Cingulate.Gray Matter.Brodmann area 30
9	792	-28	-52	48	0.0157431	7.14E-04	3.1889234	Left Cerebrum.Parietal Lobe.Sub-Gyral.White Matter.*
9		-22	-60	44	0.01466690	0.0012986	3.0117826	Left Cerebrum.Parietal Lobe.Precuneus.White Matter.*
10	704	44	36	28	0.0175766	2.52E-04	3.4789119	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter.Brodmann area 9
10		34	30	26	0.0154724	8.31E-04	3.1449628	Right Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
11	688	-30	-62	-36	0.014736	0.0012494	3.0234776	Left Cerebellum.Posterior Lobe.Cerebellar Tonsil.Gray Matter.*
11		-38	-58	-38	0.01333230	0.0026997	2.7821836	Left Cerebellum.Posterior Lobe.Cerebellar Tonsil.Gray Matter.*
12	600	12	-88	10	0.0178997	2.09E-04	3.5279536	Right Cerebrum.Occipital Lobe.Cuneus.Gray Matter.Brodmann area 17

Cluster #, cluster number; volume mm³, activation cluster volume, the unit is mm³; (x,y,z), peak coordinate in Montreal Neurological Institute (MNI) space; ALE value, activation likelihood estimation value; P, P value; Z, Z score.

Table S3 Activation results under memory task

Cluster #	Volume mm ³	MNI peak coordinate			ALE value	P	Z	Brain region
		x	y	z				
1	19,696	36	28	-6	0.0346477	7.359E-09	5.6648717	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodmann area 47
1		12	8	-10	0.0321852	4.137E-08	5.361077	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
1		10	12	-10	0.0303841	1.43E-07	5.132505	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
1		12	8	-2	0.026199	2.274E-06	4.584654	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
1		22	-28	-12	0.0248245	5.484E-06	4.397167	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Brodmann area 28
1		20	8	0	0.024628	6.186E-06	4.370945	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		12	-14	-2	0.0225273	2.273E-05	4.0777845	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
1		22	4	16	0.0220977	2.954E-05	4.016457	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		10	-2	4	0.0212079	5.06E-05	3.8877203	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
1		30	-34	-4	0.0198872	0.000111	3.692633	Right Cerebrum.Temporal Lobe.Sub-Gyral.Gray Matter. Hippocampus
1		28	-2	8	0.0195932	0.0001323	3.6476202	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		30	-14	-22	0.0169799	0.0005829	3.247131	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Hippocampus
1		30	-8	-10	0.0164687	0.0007711	3.166611	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		22	-14	-14	0.0161856	0.0008985	3.1218672	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Brodmann area 28
1		6	-16	-12	0.0136479	0.0034944	2.697378	Right Brainstem.Midbrain.*.Gray Matter.Red Nucleus
1		16	12	16	0.0133372	0.0041112	2.6428006	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		44	22	-16	0.0132961	0.0041971	2.6357903	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodmann area 47
2	13,792	-12	10	-4	0.0332791	1.936E-08	5.4966035	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
2		-20	6	0	0.0332396	1.991E-08	5.4916663	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		-14	0	12	0.0249166	5.148E-06	4.4108567	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
2		-12	-14	4	0.0238121	1.033E-05	4.2576284	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Ventral Lateral Nucleus
2		-20	12	-12	0.0186555	0.0002267	3.5068247	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		-4	-22	10	0.0120641	0.0078351	2.416508	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
3	4,992	-36	30	-4	0.0225006	2.315E-05	4.0735273	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodmann area 47
3		-30	30	-6	0.0208772	6.167E-05	3.839387	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
3		-42	14	26	0.0206692	6.991E-05	3.8085005	Left Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter. Brodmann area 9
3		-42	20	24	0.0179666	0.0003356	3.4010508	Left Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter. Brodmann area 9
3		-44	26	0	0.0171199	0.0005396	3.2690353	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodmann area 13
3		-44	28	12	0.0159589	0.0010181	3.0848901	Left Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter. Brodmann area 46
3		-50	2	30	0.0149641	0.0017449	2.9209316	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter. Brodmann area 6
3		-28	26	-12	0.014949	0.0017543	2.919261	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodmann area 47
4	3,784	4	20	44	0.0276106	9.075E-07	4.773026	Right Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodmann area 6
4		-4	32	30	0.0175436	0.0004272	3.3345222	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
4		-4	10	48	0.0150184	0.0016897	2.9309373	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 24
5	2,152	36	44	22	0.0302709	1.54E-07	5.118461	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter. Brodmann area 9
6	1,984	-20	-68	52	0.0201126	9.747E-05	3.7254817	Left Cerebrum.Parietal Lobe.Precuneus.Gray Matter.Brodmann area 7
6		-14	-68	54	0.0190361	0.0001822	3.5645986	Left Cerebrum.Parietal Lobe.Precuneus.Gray Matter.Brodmann area 7
6		-28	-64	44	0.0161373	0.0009234	3.1138344	Left Cerebrum.Parietal Lobe.Precuneus.Gray Matter.Brodmann area 7
7	1,928	-38	-62	-14	0.0255771	3.385E-06	4.5007915	Left Cerebrum.Temporal Lobe.Fusiform Gyrus.Gray Matter. Brodmann area 37
7		-48	-62	-6	0.0141913	0.0026317	2.790459	Left Cerebrum.Occipital Lobe.Middle Occipital Gyrus.Gray Matter. Brodmann area 19
8	1,440	-44	-6	50	0.02297	1.736E-05	4.140015	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter. Brodmann area 6
8		-42	-6	46	0.0222392	2.713E-05	4.0364676	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter. Brodmann area 6
9	1,432	-24	-32	-14	0.0195352	0.0001363	3.640105	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Brodmann area 36
9		-18	-34	-6	0.0147822	0.0019226	2.89059	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Brodmann area 30
10	1,360	-32	-92	10	0.0180858	0.0003137	3.4195154	Left Cerebrum.Occipital Lobe.Middle Occipital Gyrus.Gray Matter. Brodmann area 18
10		-24	-92	2	0.01565	0.0012037	3.0347435	Left Cerebrum.Occipital Lobe.Lingual Gyrus.Gray Matter.Brodmann area 17
11	1,144	34	-50	46	0.0260262	2.537E-06	4.561713	Right Cerebrum.Parietal Lobe.Superior Parietal Lobule.Gray Matter. Brodmann area 7
12	1,072	-34	-36	44	0.0223375	2.553E-05	4.05073	Left Cerebrum.Parietal Lobe.Inferior Parietal Lobule.Gray Matter. Brodmann area 40
12		-44	-38	40	0.013633	0.0035311	2.693895	Left Cerebrum.Parietal Lobe.Supramarginal Gyrus.Gray Matter. Brodmann area 40
13	1,072	24	0	52	0.0193286	0.000154	3.608463	Right Cerebrum.Frontal Lobe.Sub-Gyral.Gray Matter.Brodmann area 6
13		22	10	52	0.0158397	0.0010863	3.06555	Right Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodmann area 6
14	928	6	26	18	0.0214633	4.353E-05	3.9240777	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter. Brodmann area 33
15	872	34	-60	-16	0.0180079	0.0003282	3.407202	Right Cerebellum.Posterior Lobe.Declive.Gray Matter.*
15		36	-52	-24	0.014892	0.0018117	2.90922	Right Cerebellum.Anterior Lobe.Culmen.Gray Matter.*
15		28	-66	-18	0.0144245	0.0023294	2.8297305	Right Cerebellum.Posterior Lobe.Declive.Gray Matter.*
16	768	-22	-6	-16	0.0197451	0.0001205	3.6716435	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Amygdala

Cluster #, cluster number; volume mm³, activation cluster volume, the unit is mm³; (x,y,z), peak coordinate in Montreal Neurological Institute (MNI) space; ALE value, activation likelihood estimation value; P, P value; Z, Z score.

Table S4 Activation results under emotion task

Cluster #	Volume mm ³	MNI peak coordinate			ALE value	P	Z	Brain region
		x	y	z				
1	42,504	10	8	2	0.0448949	1.8E-13	7.2701097	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		26	-4	-12	0.035032	4.799E-10	6.116064	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
1		-10	8	6	0.034102	9.782E-10	6.001476	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		14	6	16	0.0331516	2.012E-09	5.8832917	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		-10	16	2	0.0302879	1.696E-08	5.5199833	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		-10	-8	8	0.0282734	7.382E-08	5.2555203	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
1		22	8	0	0.0245828	1E-06	4.7533875	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-16	-4	-14	0.0211195	1.042E-05	4.255781	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodmann area 28
1		-20	10	-10	0.0190189	4.109E-05	3.937971	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		6	-18	8	0.0182323	6.796E-05	3.8154821	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
1		0	-22	-12	0.0175786	0.0001023	3.713352	Left Brainstem.Midbrain.*.Gray Matter.Red Nucleus
1		-4	-6	-12	0.0174903	0.0001082	3.6990952	Left Cerebrum.Sub-lobar.*.Gray Matter.Hypothalamus
1		26	-18	-14	0.0171715	0.000132	3.648196	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodmann area 28
1		-4	-30	0	0.0166669	0.0001798	3.5680382	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Pulvinar
1		24	-16	-18	0.0165296	0.000196	3.5453465	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodmann area 28
1		-6	-14	-12	0.0161499	0.0002476	3.4833329	Left Brainstem.Midbrain.*.Gray Matter.Substantia Nigra
1		-24	-2	6	0.0157796	0.0003104	3.4223192	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-20	-4	8	0.0156096	0.0003443	3.3940725	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
1		-26	-20	-14	0.0148648	0.0005428	3.2673557	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodmann area 28
1		32	-16	-16	0.014764	0.0005768	3.2501183	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Hippocampus
1		-2	28	-4	0.0137733	0.0010426	3.0778277	Left Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodmann area 24
1		26	-20	-2	0.0101298	0.0079931	2.4092295	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
2	8,360	50	16	-2	0.0200954	2.04E-05	4.102855	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
2		52	-2	-6	0.0185306	5.619E-05	3.8621595	Right Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 22
2		34	28	8	0.0178396	8.69E-05	3.7543502	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
2		42	28	-4	0.0175085	0.0001068	3.7022624	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter.Brodmann area 47
2		46	20	24	0.015907	0.0002868	3.4438024	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter.Brodmann area 9
2		52	2	-14	0.0146352	0.00062	3.2295084	Right Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 38
2		40	22	12	0.0130165	0.0016189	2.9442036	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
2		54	-16	-2	0.012803	0.0018383	2.9046464	Right Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 22
3	4,424	-56	16	2	0.0205063	1.559E-05	4.164668	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter.Brodmann area 44
3		-50	-8	-6	0.0166346	0.0001843	3.5615766	Left Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 22
3		-46	8	0	0.0163116	0.0002245	3.5095282	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
3		-52	-2	-8	0.0156207	0.0003422	3.3957415	Left Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 22
4	2,224	-34	24	-6	0.022786	3.4E-06	4.49986	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
4		-32	26	8	0.0160245	0.0002682	3.4619243	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodmann area 13
5	1,640	-2	20	44	0.0164209	0.0002098	3.5274465	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
5		-4	14	56	0.0147994	0.000563	3.2570124	Left Cerebrum.Frontal Lobe.Superior Frontal Gyrus.Gray Matter.Brodmann area 6
5		-4	8	56	0.0142286	0.0007929	3.158501	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
5		-6	24	38	0.0106074	0.0061921	2.501006	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
6	808	-32	-22	2	0.0180839	7.472E-05	3.792009	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
7	664	-56	-16	2	0.018828	4.641E-05	3.90864	Left Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter.Brodmann area 22
8	624	-6	-50	28	0.0156103	0.0003443	3.3940725	Left Cerebrum.Limbic Lobe.Posterior Cingulate.Gray Matter.Brodmann area 31

Cluster #, cluster number; volume mm³, activation cluster volume, the unit is mm³; (x,y,z), peak coordinate in Montreal Neurological Institute (MNI) space; ALE value, activation likelihood estimation value; P, P value; Z, Z score.

Table S5 Activation results under decision-making task

Cluster #	Volume mm ³	MNI peak coordinate			ALE value	P	Z	Brain region
		x	y	z				
1	14,168	12	14	-6	0.0392321	9.86E-11	6.3636894	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
1		18	10	12	0.028605	2.26E-07	5.0455303	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		18	6	-14	0.028543	2.37E-07	5.036299	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		30	-8	8	0.0233539	7.46E-06	4.329827	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		8	-2	20	0.021768	2.04E-05	4.102916	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		12	-10	12	0.016424	0.0005015	3.2896922	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Ventral Lateral Nucleus
1		0	-6	8	0.0150655	0.0010807	3.0671124	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
2	11,848	-10	8	-6	0.0394813	8.13E-11	6.393137	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		-10	12	4	0.0306597	5.43E-08	5.311859	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
2		-26	10	-2	0.017975	0.0002047	3.5339632	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		-28	20	2	0.0159147	0.0006711	3.206795	Left Cerebrum.Sub-lobar.Clastrum.Gray Matter.*
2		-26	4	8	0.0155668	0.0008137	3.1509433	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		-28	20	-10	0.0145764	0.0014255	2.9833715	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
2		-6	12	20	0.0139725	0.0020006	2.8780596	Left Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 33
2		-6	26	-10	0.0109938	0.0093659	2.3508272	Left Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 24
3	3,488	-4	36	26	0.0226283	1.18E-05	4.2273636	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 32
3		16	32	24	0.0206593	4.09E-05	3.9392648	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 32
3		0	44	24	0.0170497	0.0003501	3.3895383	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodman area 9
3		4	34	22	0.0170266	0.0003541	3.386404	Right Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 32
4	2,240	0	-32	30	0.0261569	1.19E-06	4.7175856	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 23
4		-2	-44	34	0.0154031	0.0008961	3.1226792	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 31
4		8	-42	42	0.0134744	0.0026257	2.7911947	Right Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 31
5	1,904	32	-20	-10	0.0212323	2.86E-05	4.0236793	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
6	1,704	28	16	-2	0.0200708	5.88E-05	3.8511639	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
6		26	38	-16	0.0185867	0.0001432	3.6273649	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodman area 47
6		34	24	-10	0.0145393	0.0014576	2.9765377	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 47
7	1,632	-4	60	-16	0.0209235	3.48E-05	3.9778523	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodman area 10
7		-12	62	-6	0.0153921	0.0009012	3.1210124	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodman area 10
7		-2	56	-8	0.0151601	0.0010267	3.0823984	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter. Brodman area 10
8	1,176	-48	40	-2	0.0169345	0.0003749	3.3706992	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodman area 45
8		-48	28	-8	0.0150775	0.0010746	3.0688024	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodman area 47
8		-42	32	-10	0.0137771	0.0022188	2.8452492	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodman area 47
9	1,096	-36	-72	-24	0.0182747	0.0001728	3.5784497	Left Cerebellum.Posterior Lobe.Uvula.Gray Matter.*
9		-42	-72	-34	0.0158564	0.0006904	3.198629	Left Cerebellum.Posterior Lobe.Pyramis.Gray Matter.*
10	976	-20	-28	2	0.0193882	8.89E-05	3.748774	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Pulvinar
11	920	48	46	16	0.0191046	0.0001057	3.7049413	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.Gray Matter. Brodman area 46
12	856	56	-58	-12	0.0190601	0.0001083	3.6988568	Right Cerebrum.Temporal Lobe.Inferior Temporal Gyrus.Gray Matter. Brodman area 20
12		58	-48	-14	0.0159384	0.0006598	3.211692	Right Cerebrum.Temporal Lobe.Inferior Temporal Gyrus.Gray Matter. Brodman area 20
13	808	14	-76	50	0.0167846	0.0004084	3.3470144	Right Cerebrum.Parietal Lobe.Precuneus.Gray Matter.Brodman area 7
14	776	-20	-6	14	0.0189544	0.0001156	3.6821847	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
15	712	4	-46	6	0.0174376	0.0002798	3.4504805	Right Cerebellum.Anterior Lobe.Culmen.Gray Matter.*
16	664	-16	-24	38	0.0191346	0.0001038	3.7094822	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 31
17	624	-46	2	24	0.017823	0.0002246	3.5093415	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter. Brodman area 9
18	616	-28	-66	48	0.0156755	0.0007645	3.1691036	Left Cerebrum.Parietal Lobe.Superior Parietal Lobule.Gray Matter. Brodman area 7
18		-18	-64	44	0.0149879	0.0011308	3.0535464	Left Cerebrum.Parietal Lobe.Precuneus.Gray Matter.Brodman area 7

Cluster #, cluster number; volume mm³, activation cluster volume, the unit is mm³; (x,y,z), peak coordinate in Montreal Neurological Institute (MNI) space; ALE value, activation likelihood estimation value; P, P value; Z, Z score.

Table S6 Contrast analysis of multiple single activation task

Cluster #	Volume mm ³	MNI peak coordinate			P	Z	Brain region
		x	y	z			
Contrast: reward > memory							
1	2,112	19.4	9.7	-4.9	0.0164	0	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2	840	7.3	48	-5.3	0	3.7190173	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.*
Contrast: memory > reward							
1	1,864	22.4	-28.9	-11.1	0	3.7190173	***.*
1		36	-36	-5	0.0002	3.5400841	Right Cerebrum.Temporal Lobe.Sub-Gyral.White Matter.*
1		25	-26	-15	0.0034	2.7064834	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodman area 35
2	1,472	39	43	16	0.0004	3.352795	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.White Matter.*
2		38	42	20	0.0008	3.1559067	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.White Matter.*
2		30	44	24	0.0012	3.0356722	Right Cerebrum.Frontal Lobe.Superior Frontal Gyrus.White Matter.*
3	1,432	-21.3	-29.7	-11.2	0.0002	3.5400841	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.*.*
3		-25.2	-32.6	-12.2	0.0002	3.5400841	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
4	1,072	-46	-64	-8	0.0002	3.5400841	Left Cerebrum.Occipital Lobe.Sub-Gyral.White Matter.*
4		-46.7	-65.3	-4	0.0006	3.2388802	Left Cerebrum.Occipital Lobe.Middle Occipital Gyrus.White Matter.*
4		-38	-63	-22	0.001	3.0902321	Left Cerebellum.Posterior Lobe.Declive.Gray Matter.*
4		-34	-66	-14	0.0014	2.9888823	Left Cerebellum.Posterior Lobe.Declive.Gray Matter.*
Contrast: reward > emotion							
1	3,240	14.1	11.2	-9.2	0	3.7190173	Right Cerebrum.Sub-lobar.*.Gray Matter.*
2	2,912	-15.8	9.5	-5.4	0.001	3.0902321	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		-16	10	-2	0.0004	3.352795	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
3	1,928	8.4	47.7	-8.1	0	3.7190173	Right Cerebrum.Limbic Lobe.Anterior Cingulate.White Matter.*
3		-0.4	52.1	-7	0.0002	3.5400841	Left Cerebrum.Limbic Lobe.Anterior Cingulate.*.*
4	1,000	-1	-9	50	0.0016	2.9478426	Left Cerebrum.Frontal Lobe.Paracentral Lobule.Gray Matter.Brodman area 31
4		3	-4	48	0.0018	2.9112377	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
4		-2	6	48	0.003	2.7477813	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 24
Contrast: emotion > reward							
1	1,128	48	1	-14	0	3.7190173	Right Cerebrum.Temporal Lobe.Sub-Gyral.White Matter.*
1		48	5	0	0.0008	3.1559067	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
1		50	10	-4	0.001	3.0902321	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
1		52	-4	-12	0.0042	2.6355543	Right Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter. Brodman area 22
2	752	-25.2	-20.4	-12	0	3.7190173	Left Cerebrum.Temporal Lobe.Sub-Gyral.White Matter.*
2		-34	-18	-16	0.0002	3.5400841	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter. Hippocampus
2		-30	-20	-13	0.0004	3.352795	Left Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
Contrast: reward > decision-making							
1	1,616	19.4	9.9	-5.3	0	3.7190173	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
2	920	8	46	-6	0	3.7190173	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 32
Contrast: decision-making > reward							
1	752	31	-19	-7	0.004	2.6520698	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		28	-24	-4	0.0028	2.7703273	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		22	-24	-12	0.003	2.7477813	***.*
1		26.7	-28	-8.7	0.0034	2.7064834	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
1		26	-22	-12	0.004	2.6520698	Right Cerebrum.Limbic Lobe.Sub-Gyral.White Matter.*
Contrast: memory > emotion							
1	1,504	35	38	20	0	3.7190173	Right Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
1		39.3	44	22	0.001	3.0902321	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.White Matter.*
2	808	8	13	-16	0.0016	2.9478426	Right Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 25
2		12	12	-15	0.0026	2.794376	Right Cerebrum.Sub-lobar.*.Gray Matter.*
2		12	10	-10	0.0028	2.7703273	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
3	704	-39.3	-61.3	-21.3	0.002	2.8781617	Left Cerebellum.Posterior Lobe.Declive.Gray Matter.*
3		-36	-60	-10	0.0064	2.489286	Left Cerebrum.Occipital Lobe.Fusiform Gyrus.White Matter.*
3		-32	-60	-12	0.0082	2.39989	Left Cerebellum.Posterior Lobe.Declive.Gray Matter.*
4	608	35	-49	40	0.001	3.0902321	Right Cerebrum.Parietal Lobe.Sub-Gyral.White Matter.*
Contrast: memory > decision-making							
1	904	38.7	26.7	0	0.0002	3.5400841	Right Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
1		34	34	-4	0.0006	3.2388802	Right Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
1		32	30	0	0.0008	3.1559067	Right Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
2	856	-26	-33.3	-17.3	0.0046	2.6045313	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Brodman area 36
2		-26	-36	-11	0.0004	3.352795	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
2		-28	-30	-12	0.001	3.0902321	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
3	808	2	24	38	0.0002	3.5400841	Inter-Hemispheric.*.*.*
4	776	-42	27	2	0	3.7190173	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter.Brodman area 13
4		-36	30	0	0.0014	2.9888823	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.White Matter.*
4		-30	35	-5	1	0	Left Cerebrum.Frontal Lobe.Sub-Gyral.White Matter.*
Contrast: decision-making > emotion							
1	984	-6	34	22	0.0024	2.820158	Left Cerebrum.Limbic Lobe.Anterior Cingulate.Gray Matter.Brodman area 32
1		-4	38	26	0.0026	2.794376	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodman area 32
1		0	34	26	0.003	2.7477813	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
2	728	13.3	9.3	-13.3	0.0004	3.352795	Right Cerebrum.Sub-lobar.*.Gray Matter.*
Contrast: emotion > decision-making							
1	1,320	26.6	-4.2	-17.4	0	3.7190173	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Amygdala
2	1,088	-45	-6	-5	0.0002	3.5400841	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
2		-46	-10	-6	0.0004	3.352795	Left Cerebrum.Sub-lobar.Insula.*.*
2		-50	2	-8	0.0006	3.2388802	Left Cerebrum.Temporal Lobe.Superior Temporal Gyrus.Gray Matter. Brodman area 22
2		-46	6	-4	0.0028	2.7703273	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13
2		-50	10	-2	0.0036	2.6874495	Left Cerebrum.Sub-lobar.Insula.*.*
2		-46	12	-2	0.0046	2.6045313	Left Cerebrum.Sub-lobar.Insula.Gray Matter.Brodman area 13

Cluster #, cluster number; volume mm³, activation cluster volume, the unit is mm³; (x,y,z), peak coordinate in Montreal Neurological Institute (MNI) space; ALE value, activation likelihood estimation value; P, P value; Z, Z score.

Table S7 Conjunction analysis of multiple single activation task

Cluster #	Volume mm ³	MNI peak coordinate			ALE value	Brain region
		x	y	z		
Conjunction: reward_conj_memory						
1	11,048	-12	10	-4	0.033279087	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-18	8	0	0.03261438	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-24	4	4	0.023548719	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-12	0	12	0.022341166	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		-20	12	-12	0.018655526	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-14	-8	-4	0.014634266	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-8	-14	6	0.014228115	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
2	10,240	12	8	-10	0.032185193	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		10	12	-10	0.030384148	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		34	26	-6	0.028880097	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		12	8	-2	0.026198952	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		20	8	0	0.024628002	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		8	-2	4	0.01934089	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Anterior Nucleus
2		28	0	6	0.017268842	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		18	-2	8	0.016190035	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		18	4	16	0.014271136	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
2		18	8	16	0.013320627	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
3	472	-2	30	30	0.015150301	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
3		2	30	38	0.013589921	Inter-Hemispheric.*.*.*
4	208	4	18	40	0.014469479	Right Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
5	184	-22	-2	-16	0.014614396	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
6	184	28	-6	-12	0.014626038	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
7	168	8	-16	4	0.015321739	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
8	168	-4	8	48	0.014732766	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 24
9	136	16	-14	0	0.013778226	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
10	64	30	-10	-22	0.013231937	Right Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
11	64	-42	-10	52	0.01248834	Left Cerebrum.Frontal Lobe.Precentral Gyrus.Gray Matter.Brodmann area 4
12	16	6	26	24	0.011216096	Right Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
13	8	26	-8	-14	0.011271476	Right Cerebrum.Sub-lobar.*.Gray Matter.Amygdala
14	8	22	-8	-12	0.011193498	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
15	8	18	-8	-4	0.011304774	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
16	8	-4	-20	8	0.011540647	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
17	8	-26	-60	42	0.011511424	Left Cerebrum.Parietal Lobe.Precuneus.White Matter.*
Conjunction: reward_conj_emotion						
1	25,440	10	8	2	0.044894863	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		-10	8	6	0.034101978	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		26	0	-12	0.02923035	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		22	8	0	0.02458282	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		14	2	16	0.024015015	Right Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
1		-18	-2	-12	0.020652795	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-20	10	-10	0.01901887	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		6	-18	8	0.01823227	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
1		-24	-2	6	0.015779603	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-6	-10	8	0.015747154	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
1		-12	-8	14	0.01422217	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
1		-10	-4	12	0.013886281	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		14	-10	12	0.010785186	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Ventral Lateral Nucleus
2	888	-4	-18	-14	0.015541157	Left Brainstem.Midbrain.*.*
2		-4	-28	-4	0.011649065	Left Brainstem.Midbrain.*.*
3	888	34	26	6	0.01605417	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
3		38	26	-4	0.01575051	Right Cerebrum.Sub-lobar.Insula.Gray Matter.*
4	216	-32	22	-2	0.015833732	Left Cerebrum.Sub-lobar.Insula.White Matter.*
5	168	-4	10	54	0.013073181	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
5		-2	4	56	0.012588951	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
6	88	14	-14	0	0.011461202	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
7	24	-2	2	56	0.011407402	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
8	16	-4	12	54	0.011988824	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
9	8	32	18	-4	0.009780914	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
10	8	-32	20	6	0.009819939	Left Cerebrum.Sub-lobar.Insula.White Matter.*
11	8	-30	22	6	0.01103627	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
Conjunction: reward_conj_decision-making						
1	10,592	-10	8	-6	0.039481327	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-10	12	4	0.0306597	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
1		-26	10	-4	0.017462585	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-28	20	2	0.015914729	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-26	4	8	0.015566818	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-24	18	-12	0.011963048	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2	9,512	12	14	-6	0.039232075	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		20	8	-14	0.021525828	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		10	-2	18	0.017395828	Right Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
2		12	-8	12	0.015094435	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
2		0	-6	8	0.015065536	Inter-Hemispheric.Sub-lobar.Extra-Nuclear.White Matter.*
2		14	6	14	0.014449487	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Body
2		10	-12	10	0.013836882	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
2		28	-2	6	0.013286449	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
3	536	26	14	-2	0.015084863	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
3		34	24	-10	0.014539308	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.White Matter.*
3		32	20	-4	0.013471166	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
4	376	-18	-4	16	0.016731545	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
5	160	-2	54	-8	0.014449894	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.*
5		-2	52	-14	0.012478291	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.*.*
6	72	-20	-62	46	0.012929494	Left Cerebrum.Parietal Lobe.Precuneus.White Matter.*
7	56	8	36	24	0.012220076	Right Cerebrum.Limbic Lobe.Cingulate Gyrus.White Matter.*
8	24	-2	32	28	0.01310776	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
9	16	28	12	-2	0.011703827	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
10	16	-4	30	28	0.011982411	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.White Matter.*
11	16	0	34	28	0.012060597	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
12	8	-40	-62	-36	0.010981381	Left Cerebellum.Posterior Lobe.Cerebellar Tonsil.Gray Matter.*
13	8	34	16	-2	0.011025434	Right Cerebrum.Sub-lobar.Clastrum.Gray Matter.*
14	8	20	2	10	0.010941391	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
15	8	4	-50	12	0.01090003	Right Cerebrum.Limbic Lobe.Posterior Cingulate.*.*
16	8	-2	30	26	0.011127329	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
17	8	0	32	26	0.011606091	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.*.*
18	8	2	34	26	0.012015814	Inter-Hemispheric.*.*.*
Conjunction: memory_conj_emotion						
1	8,568	-10	10	0	0.026224438	Left Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
1		-14	2	10	0.022134723	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-12	-10	6	0.02141949	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.Ventral Lateral Nucleus
1		-18	10	-8	0.017855821	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-10	-4	10	0.017498232	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
1		-24	-2	6	0.015779603	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2	5,280	12	8	-2	0.026198952	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		20	8	0	0.023372296	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		12	16	-4	0.021903273	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		20	6	16	0.018750329	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		16	12	16	0.013337228	Right Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
3	992	40	28	-4	0.016910002	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter.Brodmann area 47
3		34	26	4	0.014510156	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
4	936	28	-8	-10	0.016445965	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Lateral Globus Pallidus
4		30	-16	-18	0.013984475	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Hippocampus
4		24	-14	-16	0.013682182	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
5	640	8	-16	4	0.014939671	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.Medial Dorsal Nucleus
6	448	-20	-4	-16	0.016334414	Left Cerebrum.Limbic Lobe.Parahippocampal Gyrus.Gray Matter.Amygdala
7	416	-2	20	44	0.016420934	Left Cerebrum.Frontal Lobe.Medial Frontal Gyrus.Gray Matter.Brodmann area 6
8	360	-36	26	-4	0.017461129	Left Cerebrum.Sub-lobar.Insula.Gray Matter.*
9	16	-38	24	8	0.011313089	Left Cerebrum.Sub-lobar.Insula.White Matter.*
10	8	-40	26	4	0.009834221	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.Gray Matter.Brodmann area 13
Conjunction: memory_conj_decision-making						
1	6,400	-12	10	-4	0.033279087	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
1		-26	10	-2	0.01744608	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-26	4	8	0.015566818	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
1		-10	2	10	0.014426751	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2	6,368	10	12	-10	0.030384148	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		12	8	-2	0.026198952	Right Cerebrum.Sub-lobar.Caudate.Gray Matter.Caudate Head
2		20	6	14	0.017457647	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
2		28	-4	8	0.016826339	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		20	6	6	0.016562644	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
2		16	12	16	0.013337228	Right Cerebrum.Sub-lobar.Lateral Ventricle.Cerebro-Spinal Fluid.*
2		16	-4	-2	0.012518587	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
3	720	30	18	-2	0.016932553	Right Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
3		26	16	-2	0.016173916	Right Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Putamen
3		34	24	-10	0.014539308	Right Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.White Matter.*
4	344	-16	-6	16	0.015760321	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
5	240	-4	34	30	0.016284596	Left Cerebrum.Limbic Lobe.Cingulate Gyrus.Gray Matter.Brodmann area 32
6	176	-26	-66	46	0.013775799	Left Cerebrum.Parietal Lobe.Precuneus.White Matter.*
7	160	26	-26	-12	0.016076565	Right Cerebrum.Limbic Lobe.Parahippocampal Gyrus.White Matter.*
8	80	-20	-6	-14	0.012019973	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
9	24	44	44	22	0.011751012	Right Cerebrum.Frontal Lobe.Middle Frontal Gyrus.White Matter.*
10	16	-14	-4	-4	0.011666442	Left Cerebrum.Sub-lobar.Lentiform Nucleus.Gray Matter.Medial Globus Pallidus
11	16	-8	0	8	0.011855342	Left Cerebrum.Sub-lobar.Extra-Nuclear.White Matter.*
12	16	10	30	22	0.011002142	Right Cerebrum.Limbic Lobe.Anterior Cingulate.*.*
13	16	-50	2	26	0.012505072	Left Cerebrum.Frontal Lobe.Precentral Gyrus.White Matter.*
14	16	-48	2	28	0.012040478	Left Cerebrum.Frontal Lobe.Precentral Gyrus.White Matter.*
15	8	-28	24	-10	0.011261929	Left Cerebrum.Frontal Lobe.Inferior Frontal Gyrus.White Matter.*
16	8	-8	0	4	0.011642123	Left Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
17	8	12	-6	10	0.011517352	Right Cerebrum.Sub-lobar.Thalamus.Gray Matter.*
18	8	14	-6			