Supporting Information

Regions of interest

Anterior Cingulate Cortex (ACC; Brodmann Area 24): As shown in human studies, the ACC is agranular (lacking a layer IV) and has a prominent layer V. There are three major subdivisions of area 24: area 24a lies partially within the callosal sulcus and has homogeneous layers II and III; area 24b on the gyral surface has a very prominent layer Va and distinct layers IIIa-b and IIIc, and area 24c in the ventral bank of the callosal sulcus has thin layers II-III and no differentiation of layer V (Vogt, 1995).

Posterior Cingulate Cortex (PCC; Brodmann Area 23): In contrast to the ACC, BA 23 has a layer IV and a less prominent layer V (Vogt et al., 1995). Blocks from the posterior cingulate were removed at the brain bank, and Nissl stained sections were used to differentiate BA 23 from the surrounding areas (Vogt et al., 2006).

Fusiform Gyrus (FFG; Brodmann Area 37): The fusiform gyrus (occipitotemporal gyrus) extends the length of the inferior occipitotemporal surface, bound medially by the parahippocampal gyrus and laterally by the occipitotemporal gyrus in humans. BA 37 is a subdivision of the cytoarchitectually defined temporal region of cerebral cortex, located primarily in the caudal portions of the fusiform gyrus and inferior temporal gyrus (Brodmann, 1909). The fusiform gyrus was identified on tissue at the brain bank as follows: the medial margin was defined by the collateral and rhinal sulci and the lateral boundary was taken as the sulcus medial to the inferior temporal gyrus (McDonald et al., 2000).

Table I. Summary of $GABA_B$ receptor binding density values in autistic and control cases from the anterior and posterior cingulate cortices.

		Anterior Cingulate Cortex (fmol/mg tissue)		Posterior Cingulate Cortex (fmol/mg tissue)	
Case	**Diagnosis**	**Superficial**	**Deep**	**Superficial**	**Deep**
1078	Autism	643.25	811.24		
1401	Autism	790.97	368.70	963.70	1019.88
1484	Autism	548.04	351.26	1158.92	1074.94
2825	Autism	939.14	823.09	1445.63	1453.49
3845	Autism	360.36	331.97	1911.35	1349.47
4099	Autism	484.16	589.88	1415.91	1299.98
5754	Autism	798.03	368.08	1611.28	982.78
Mean ± SEM		**652.00 ± 76.72**	**520.59 ± 83.29**	**1272.52 ± 185.26**	**1111.27 ± 108.97**
4103	Control	898.59	553.56	2194.37	1295.61
4104	Control	1212.70	545.45	2419.32	1588.28
4188	Control	773.99	386.45		
4267	Control	725.08	561.26	1968.94	1748.37
4268	Control	743.67	479.57	1757.45	1264.78
4269	Control	1528.56	437.66	1693.75	1150.21
4271	Control	1582.77	721.91	1676.09	1239.58
4275	Control	907.30	480.06	2282.13	1793.40
4364	Control	800.72	518.79		
Mean ± SEM		**1019.26 ± 112.54**	**520.52 ± 31.64**	**1998.87 ± 114.61**	**1440.03 ± 93.28**

Table II. Specific receptor binding density in the fusiform gyrus in autism and control cases.

		Fusiform Gyrus Binding (fmol/mg tissue)	
Case	**Diagnosis**	**Superficial**	**Deep**
1664	Autism	125.92	109.10
4899	Autism	226.63	149.16
5000	Autism	241.66	126.51
5027	Autism	235.65	156.81
5144	Autism	246.13	131.46
5173	Autism	163.79	92.46
6337	Autism	175.78	126.93
6677	Autism	201.36	116.82
Mean ± SEM		**195. 22± 16.87**	**124.81 ± 7.69**
602	Control	287.55	184.22
1026	Control	130.70	104.91
1365	Control	263.68	195.18
4605	Control	350.38	236.21
4642	Control	234.40	187.77
4916	Control	237.99	152.72
5873	Control	246.18	174.16
6004	Control	275.04	156.40
6207	Control	232.37	197.40
6221	Control	320.83	176.43
Mean ± SEM		**257.91 ± 18.75**	**176.54 ± 10.87**