**Table S1 A: Number of samples grouped together in each of the 117 common larger brain regions**.

|  |  |  |  |
| --- | --- | --- | --- |
| **Tzourio-Mazoyer ID** | **Region Name** | **# Gene Expression samples (brain 1)** | **# Gene Expression samples (brain 2)** |
| 1 | Left precentral gyrus | 14 | 8 |
| 2 | Right precentral gyrus | 14 | 5 |
| 3 | Left superior frontal gyrus, dorsolateral | 10 | 5 |
| 4 | Right superior frontal gyrus, dorsolateral | 10 | 11 |
| 5 | Left superior frontal gyrus, orbital part | 9 | 4 |
| 6 | Right superior frontal gyrus, orbital part | 1 | 5 |
| 7 | Left middle frontal gyrus, lateral part | 11 | 8 |
| 8 | Right middle frontal gyrus, lateral part | 8 | 10 |
| 9 | Left middle frontal gyrus, orbital part | 3 | 3 |
| 10 | Right middle frontal gyrus, orbital part | 2 | 1 |
| 11 | Left opercular part of inferior frontal gyrus | 2 | 1 |
| 12 | Right opercular part of inferior frontal gyrus | 3 | 5 |
| 13 | Left area triangularis | 3 | 4 |
| 14 | Right area triangularis | 4 | 4 |
| 15 | Left orbital part of inferior frontal gyrus | 4 | 4 |
| 16 | Right orbital part of inferior frontal gyrus | 1 | 1 |
| 17 | Left rolandic operculum | 3 | 3 |
| 18 | Right rolandic operculum | 2 | 2 |
| 19 | Left supplementary motor area | 2 | 1 |
| 20 | Right supplementary motor area | 5 | 2 |
| 21 | Left olfactory cortex | 1 | 1 |
| 22 | Right olfactory cortex | 1 | 1 |
| 23 | Left superior frontal gyrus, medial part | 12 | 4 |
| 24 | Right superior frontal gyrus, medial part | 4 | 2 |
| 25 | Left superior frontal gyrus, medial orbital part | 2 | 5 |
| 26 | Right superior frontal gyrus, medial orbital part | 2 | 9 |
| 27 | Left gyrus rectus | 5 | 6 |
| 28 | Right gyrus rectus | 3 | 4 |
| 29 | Left insula | 6 | 7 |
| 30 | Right insula | 8 | 3 |
| 31 | Left anterior cingulate gyrus | 6 | 4 |
| 32 | Right anterior cingulate gyrus | 2 | 7 |
| 33 | Left middle cingulate | 3 | 12 |
| 34 | Right middle cingulate | 3 | 9 |
| 35 | Left posterior cingulate gyrus | 2 | 1 |
| 36 | Right posterior cingulate gyrus | 1 | 1 |
| 37 | Left hippocampus | 26 | 21 |
| 38 | Right hippocampus | 30 | 14 |
| 39 | Left parahippocampal gyrus | 13 | 12 |
| 40 | Right parahippocampal gyrus | 17 | 11 |
| 41 | Left amygdala | 1 | 3 |
| 42 | Right amygdala | 2 | 1 |
| 43 | Left calcarine sulcus | 6 | 5 |
| 44 | Right calcarine sulcus | 2 | 4 |
| 45 | Left cuneus | 1 | 1 |
| 46 | Right cuneus | 2 | 1 |
| 47 | Left lingual gyrus | 6 | 6 |
| 48 | Right lingual gyrus | 7 | 9 |
| 49 | Left superior occipital | 1 | 2 |
| 50 | Right superior occipital | 1 | 3 |
| 51 | Left middle occipital | 4 | 7 |
| 52 | Right middle occipital | 4 | 5 |
| 53 | Left inferior occipital | 1 | 6 |
| 54 | Right inferior occipital | 2 | 5 |
| 55 | Left fusiform gyrus | 18 | 8 |
| 56 | Right fusiform gyrus | 11 | 9 |
| 57 | Left postcentral gyrus | 17 | 8 |
| 58 | Right postcentral gyrus | 6 | 5 |
| 59 | Left superior parietal lobule | 1 | 2 |
| 60 | Right superior parietal lobule | 5 | 3 |
| 61 | Left inferior parietal lobule | 4 | 6 |
| 62 | Right inferior parietal lobule | 3 | 3 |
| 63 | Left supramarginal gyrus | 2 | 1 |
| 64 | Right supramarginal gyrus | 8 | 2 |
| 65 | Left angular gyrus | 4 | 1 |
| 66 | Right angular gyrus | 4 | 2 |
| 67 | Left precuneus | 10 | 4 |
| 68 | Right precuneus | 5 | 4 |
| 69 | Left paracentral lobule | 6 | 4 |
| 70 | Right paracentral lobule | 1 | 6 |
| 71 | Left caudate nucleus | 7 | 8 |
| 72 | Right caudate nucleus | 7 | 4 |
| 73 | Left putamen | 13 | 8 |
| 74 | Right putamen | 15 | 7 |
| 75 | Left globus pallidus | 1 | 2 |
| 76 | Right globus pallidus | 1 | 3 |
| 77 | Left thalamus | 27 | 30 |
| 78 | Right thalamus | 21 | 15 |
| 79 | Left transverse temporal gyri | 1 | 1 |
| 80 | Right transverse temporal gyri | 2 | 3 |
| 81 | Left superior temporal gyrus | 11 | 4 |
| 82 | Right superior temporal gyrus | 13 | 4 |
| 83 | Left superior temporal pole | 2 | 1 |
| 84 | Right superior temporal pole | 3 | 2 |
| 85 | Left middle temporal gyrus | 25 | 12 |
| 86 | Right middle temporal gyrus | 18 | 9 |
| 87 | Left middle temporal pole | 1 | 1 |
| 88 | Right middle temporal pole | 1 | 1 |
| 89 | Left inferior temporal gyrus | 20 | 17 |
| 90 | Right inferior temporal gyrus | 20 | 8 |
| 91 | Left crus I of cerebellar hemisphere | 2 | 4 |
| 92 | Right crus I of cerebellar hemisphere | 4 | 2 |
| 93 | Left crus II of cerebellar hemisphere | 5 | 7 |
| 94 | Right crus II of cerebellar hemisphere | 1 | 6 |
| 95 | Left Lobule III of cerebellar hemisphere | 2 | 1 |
| 96 | Right Lobule III of cerebellar hemisphere | 1 | 1 |
| 97 | Left lobule IV, V of cerebellar hemisphere | 3 | 4 |
| 98 | Right lobule IV, V of cerebellar hemisphere | 1 | 1 |
| 99 | Left Lobule VI of cerebellar hemisphere | 5 | 3 |
| 100 | Right Lobule VI of cerebellar hemisphere | 1 | 3 |
| 101 | Left lobule VIIB of cerebellar hemisphere | 1 | 1 |
| 102 | Right lobule VIIB of cerebellar hemisphere | 3 | 1 |
| 103 | Left lobule VIII of cerebellar hemisphere | 2 | 4 |
| 104 | Right lobule VIII of cerebellar hemisphere | 1 | 2 |
| 105 | Left lobule IX of cerebellar hemisphere | 1 | 1 |
| 106 | Right lobule IX of cerebellar hemisphere | 3 | 7 |
| 107 | Left lobule X of cerebellar hemisphere (flocculus) | 1 | 1 |
| 108 | Right lobule X of cerebellar hemisphere (flocculus) | 1 | 1 |
| 109 | Lobule I, II of vermis | 1 | 1 |
| 110 | Lobule III of vermis | 1 | 1 |
| 111 | Lobule IV, V of vermis | 5 | 3 |
| 112 | Lobule VI of vermis | 1 | 5 |
| 113 | Lobule VII of vermis | 1 | 2 |
| 114 | Lobule VIII of vermis | 6 | 4 |
| 115 | Lobule IX of vermis | 2 | 1 |
| 116 | Lobule X of vermis (nodulus) | 2 | 1 |
|  | Brain Stem | 112 | 148 |

**Table S1 B**: The anatomical brain regions used in full analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cluster Symbol** | **Region ID** | **Brain region** | **# Gene Expression samples (brain 1)** | **# Gene Expression samples (brain 2)** |
| $$C\_{1}^{F}$$ | 4009 | Frontal lobe | 93 | 120 |
| $$C\_{2}^{F}$$ | 4084 | Parietal lobe | 52 | 61 |
| $$C\_{3}^{F}$$ | 4132 | Temporal lobe | 73 | 121 |
| $$C\_{4}^{F}$$ | 4180 | Occipital lobe | 43 | 24 |
| $$C\_{5}^{F}$$ | 4268 | Insula | 6 | 10 |
| $$C\_{6}^{F}$$ | 4220 | Cingulate gyrus | 26 | 17 |
| $$C\_{7}^{F}$$ | 4242 | Parahippocampal gyrus | 9 | 12 |
| $$C\_{8}^{F}$$ | 4249 | Hippocampal formation | 47 | 46 |
| $$C\_{9}^{F}$$ | 4276 | Basal ganglia | 54 | 44 |
| $$C\_{10}^{F}$$ | 4300 | Basal forebrain | 6 | 6 |
| $$C\_{11}^{F}$$ | 4321 | Claustrum | 11 | 15 |
| $$C\_{12}^{F}$$ | 4327 | Amygdala | 18 | 10 |
| $$C\_{13}^{F}$$ | 4391 | Diencephalon | 73 | 64 |
| $$C\_{14}^{F}$$ | 9001 | Mesencephalon | 49 | 43 |
| $$C\_{15}^{F}$$ | 4696 | Cerebellum | 57 | 40 |
| $$C\_{16}^{F}$$ | 9131 | Pons | 38 | 46 |
| $$C\_{17}^{F}$$ | 9512 | Myelencephalon | 64 | 48 |
| $$C\_{18}^{F}$$ | 9218 | White matter | 1 | 3 |