

Numbers2regions for the Hammers_mith atlas n30r83

The region list on the next page translates the (essentially arbitrary) voxel value coding for the regions into anatomical names.

The exact region definitions and protocols used for manually delineating the 30x83 regions can be found in the following papers:

(for regions 1-49):

Hammers A, Allom R, Koepp MJ, Free SL, Myers R, Lemieux L, Mitchell TN, Brooks DJ, Duncan JS. Three-dimensional maximum probability atlas of the human brain, with particular reference to the temporal lobe. *Hum Brain Mapp* 2003, 19: 224-247.

(for regions 50-83):

Gousias IS, Rueckert D, Heckemann RA, Dyet LE, Boardman JP, Edwards AD, **Hammers A**. Automatic segmentation of brain MRIs of 2-year-olds into 83 regions of interest. *Neuroimage* 2008 Apr 1;40(2):672-684
and on the associated web page, www.brain-development.org.

IMPORTANT HINT:

Odd numbers always indicate a region on the right side of the brain; even numbers one on the left. This can help when using n30r83 with new software, to check R/L orientation is correct after spatial manipulations.

Alexander Hammers, Lyon, 15 December 2011.

Number in Atlas	Name of Structure
<i>Temporal Lobe</i>	
1; 2	Hippocampus
3; 4	Amygdala
5; 6	Anterior temporal lobe, medial part
7; 8	Anterior temporal lobe, lateral part
9; 10	Parahippocampal and ambient gyri
11; 12	Superior temporal gyrus, posterior part
13; 14	Middle and inferior temporal gyrus
15; 16	Fusiform gyrus
30; 31	Posterior temporal lobe
82; 83	Superior temporal gyrus, anterior part
<i>Posterior Fossa</i>	
17; 18	Cerebellum
19	Brainstem
<i>Insula and Cingulate gyri</i>	
20; 21	Insula
24; 25	Cingulate gyrus (gyrus cinguli), anterior part
26; 27	Cingulate gyurs (gyrus cinguli), posterior part
<i>Frontal Lobe</i>	
28; 29	Middle frontal gyrus
50; 51	Precentral gyrus
52; 53	Straight gyrus
54; 55	Anterior orbital gyrus
56; 57	Inferior frontal gyrus
58; 59	Superior frontal gyrus
68; 69	Medial orbital gyrus
70; 71	Lateral orbital gyrus
72; 73	Posterior orbital gyrus
76; 77	Subgenual frontal cortex
78; 79	Subcallosal area
80; 81	Pre-subgenual frontal cortex
<i>Occipital Lobe</i>	
64; 65	Lingual gyrus
66; 67	Cuneus
22; 23	Lateral remainder of occipital lobe
<i>Parietal Lobe</i>	
60; 61	Postcentral gyrus
62; 63	Superior parietal gyrus
32; 33	Inferiolateral remainder of parietal lobe
<i>Central Structures</i>	
34; 35	Caudate nucleus
36; 37	Nucleus accumbens
38; 39	Putamen
40; 41	Thalamus
42; 43	Pallidum
44	Corpus callosum
74; 75	Substantia nigra
<i>Ventricles</i>	
45; 46	Lateral ventricle (excluding temporal horn)
47; 48	Lateral ventricle, temporal horn
49	Third ventricle