

 # 1 # 2 # 3 # 4		Region #1	Region #2	Region #3	Region #4
	Cresyl violet A	1 31 61 16 46 76	91 121 151 106 136 166	181 211 241 196 226 256	271 301 331 286 316 346
	NeuN B	2 32 62 17 47 77	92 122 152 107 137 167	182 212 242 197 227 257	272 302 332 287 317 347
	ED1 C	3 33 63 18 48 78	93 123 153 108 138 168	183 213 243 198 228 258	273 303 333 288 318 348
	Human nuclei D	4 34 64 19 49 79	94 124 154 109 139 169	184 214 244 199 229 259	274 304 334 289 319 349
	spare E	5 35 65 20 50 80	95 125 155 110 140 170	185 215 245 200 230 260	275 305 335 290 320 350

Supplemental Figure S1. Brain tissue sectioning methodology for morphology/pathology analysis in chronic stroke rat. Rat brains from each group were subjected to serial coronal sections in 30 μ m-thick using a cryostat. Five consecutive coronal sections numbered 1, 2, 3, 4, and 5 were obtained started from bregma +4.2 mm and onward, which were placed on slides lettered A, B, C, D, and E. Subsequently, the next 10 consecutive slices were discarded. The following 10 consecutive slices numbered 16, 17, 18, 19, and 20 were then placed on slides lettered A, B, C, D, and E. For region #1, the same procedures were repeated until section numbered 80 was obtained and placed on a slide. Sections were subjected to various immunohistochemical stainings for observing the pathological conditions, the number of neuronal cells, and distribution of HUMSCs within region #1. Similarly, the procedures of sectioning and staining were repeated until section numbered 350 was collected at around bregma -5.8 mm. From anterior to posterior, the brain sections could be divided into four regions (#1 to #4), which enabled observation of alterations in the entire cerebral cortex. The first row's slices represent the brain sections from regions #1 to #4 placed on the first slide, which was subjected to cresyl violet staining to observe any pathological changes. The second row's slices represent the brain sections from regions #1 to #4 placed on the second slide, which was subjected to immunohistochemical staining using anti-neural nuclei antigen (NeuN) to observe changes of neuronal cells. The third row's slices represent the brain sections from regions #1 to #4 placed on the third slide, which was subjected to immunohistochemical staining using anti-ED1 to observe changes of microglia. The fourth row's slices represent the brain sections from regions #1 to #4 placed on the fourth slide, which was subjected to immunohistochemical staining using anti-human-specific nuclei antigen to investigate the distribution of HUMSCs. The fifth row's slices represent the brain sections from regions #1 to #4 placed on the fifth slide, which was preserved as spares.