**Supplementary Table 1.** Morphological and functional characteristics of neurons in the temporal cortex and in the hippocampal areas of CA1-CA2 and CA3-CA4 in olfactory-bulbectomized (OBX) mice after immunization against different p75NTR fragments.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | GroupOf mice | Neuronal density (n/mm2) | Normal neurons(%) | Pathological neurons (%) |
| Pyknosis | Cytolysis | Karyolysis | Vacuolization |
| Temporal cortex | SOOBX(32-46)(39-47)(66-72)(86-93)(97-105)(115-122)(147-154)(155-164)(167-176) | 1200±15.7\*\*1110±16.1883±12.8\*\*1122±7.91099±8.3971±12.9\*\*1123±8.71049±18.4\*950±24.4\*\*1113±8.91298±9.1\*\* | 79.1±0.80\*\*50.4±0.7363.6±0.3969.6±0.96\*\*73.5±0.40\*\*65.9±0.44\*\*75.0±0.62\*\*67.7±0.89\*\*71.6±1.05\*\*69.9±0.69\*\*74.0±1.38\*\* | 3.1±0.26\*\*14.1±0.344.4±0.25\*\*4.1±0.23\*\*2.4±0.18\*\*2.4±0.21\*\*3.8±0.34\*\*3.8±0.31\*\*2.4±0.49\*\*5.6±0.31\*\*4.2±0.26\*\* | 10.9±0.43\*\*24.3±0.5720.9±0.25\*\*13.7±0.49\*\*15.3±0.44\*\*19.9±0.27\*\*13.1±0.33\*\*18.3±0.47\*\*18.4±0.58\*\*14.6±0.39\*\*11.7±0.63\*\* | 4.4±0.21\*\*7.3±0.215.4±0.23\*\*4.4±0.23\*\*5.1±0.19\*\*6.5±0.194.1±0.21\*\*6.1±0.34\*4.8±0.42\*\*5.5±0.25\*\*4.5±0.27\*\* | 1.7±0.15\*\*3.9±0.35.7±0.23\*\*8.1±0.59\*\*3.7±0.215.2±0.23\*\*3.9±0.294.2±0.292.8±0.33\*4.7±0.22\*5.6±0.61\* |
| СА1-СА2 (Hippocampus) | SOOBX(32-46)(39-47)(66-72)(86-93)(97-105)(115-122)(147-154)(155-164)(167-176) | 2782±21.1\*2749±22.32693±13.92741±18.42783±14.32664±13.3\*\*2781±11.72652±17.5\*2656±32.4\*2745±14.62814±18.8\* | 83.6±0.68\*\*58.9±0.7973.2±0.47\*\*74.4±0.70\*\*80.5±0.46\*\*69.8±0.46\*\*80.9±0.91\*\*70.2±0.55\*\*75.8±1.08\*\*75.8±1.02\*\*73.9±0.65\*\* | 2.2±0.22\*\*10.3±0.411.3±0.13\*\*2.6±0.25\*\*1.0±0.13\*\*1.1±0.15\*\*2.4±0.31\*\*2.1±0.31\*\*0.9±0.35\*\*3.6±0.27\*\*3.6±0.24\*\* | 9.6±0.43\*\*21.4±0.4216.2±0.31\*\*13.7±0.36\*\*12.4±0.28\*\*19.3±0.27\*\*10.7±0.43\*\*17.6±0.27\*\*11.6±0.81\*\*13.0±0.51\*\*12.8±0.32\*\* | 3.5±0.29\*\*6.3±0.375.8±0.333.2±0.21\*\*3.8±0.21\*\*4.4±0.22\*\*3.2±0.25\*6.3±0.266.3±0.374.6±0.22\*\*5.6±0.27 | 1.2±0.17\*\*3.1±0.243.6±0.196.1±0.52\*\*2.2±0.21\*5.8±0.21\*\*2.8±0.273.7±0.245.4±0.56\*3.4±0.414.0±0.45 |
| СА3-СА4 (Hippocampus) | SOOBX(32-46)(39-47)(66-72)(86-93)(97-105)(115-122)(147-154)(155-164)(167-176) | 2123±20.52066 ± 21.12037±11.22008±14.1\*2045±9.72089±11.32006±11.2\*2011±12.9\*2042±34.52053±14.22119±10.3\* | 82.1±0.63\*\*56.5±1.0068.5±0.82\*\*75.4±0.73\*\*79.2±0.53\*\*66.6±0.37\*\*78.1±0.74\*\*69.1±1.80\*\*77.6±0.92\*\*78.1±1.01\*\*77.3±1.26\*\* | 2.1±0.23\*\*10.2±0.461.4±0.16\*\*3.9±0.37\*\*1.1±0.13\*\*0.9±0.12\*\*2.9±0.26\*\*1.5±0.19\*\*1.3±0.37\*\*3.4±0.24\*\*2.8±0.23\*\* | 10.3±0.44\*\*23.5±0.6218.3±0.45\*\*11.1±0.42\*\*13.0±0.30\*\*20.4±0.25\*\*11.9±0.44\*\*16.1±0.43\*\*12.2±0.51\*\*12.4±0.58\*\*10.8±0.70\*\* | 3.9±0.24\*\*7.4±0.326.1±0.27\*3.5±0.24\*\*3.3±0.19\*\*6.6±0.223.5±0.21\*\*5.9±0.22\*\*4.4±0.37\*\*3.4±0.31\*\*4.3±0.27\*\* | 1.6±0.19\*2.3±0.215.9±0.28\*\*6.0±0.32\*\*3.4±0.21\*\*5.6±0.21\*\*3.4±0.21\*6.0±0.25\*\*4.5±0.43\*\*2.8±0.234.8±0.43\*\* |

Notes: Statistical characterization (mean ± SEM) of OBX-mice immunized against p75NTR fragments (shown in brackets), where stars denote significant (\*p < 0.05; \*\* р < 0.01, Mann-Whitney U-test) differenceversus "OBX" (underlined) group.

**Supplementary Table 2.** Morphological and functional characteristics of neurons in the temporal cortex and in the hippocampal areas of CA1-CA2 and CA3-CA4 in sham-operated (SO) mice after immunization against different p75NTR fragments.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Groupof mice | Neuronal density (n/mm2) | Normal neurons(%) | Pathological neurons (%) |
| Pyknosis | Cytolysis | Karyolysis | Vacuolization |
| Temporal cortex | Vehicle(39-47)(86-93)(97-105)(147-154)(155-164)(167-176) | 1200±15.71193±12.81181±13.71179±10.91175±12.81181±13.91198±15.0 | 79.1±0.8074.2±0.48\*\*68.8±0.52\*\*73.5±0.40\*\*71.1±0.33\*\*73.9±0.47\*\*79.2±0.86 | 3.1±0.262.8±0.251.0±0.19\*\*2.7±0.252.7±0.184.2±0.24\*3.8±0.28 | 10.9±0.4413.8±0.28\*\*15.9±0.36\*\*13.4±0.31\*\*14.3±0.22\*\*14.3±0.25\*\*10.3±0.46 | 4.4±0.214.5±0.28.1±0.28\*\*5.0±0.196.2±0.22\*\*3.5±0.20\*3.5±0.20\* | 1.7±0.2 4.6±0.27\*\*6.3±0.25\*\*5.5±0.23\*\*5.6±0.25\*\*4.0±0.24\*\*3.3±0.27\*\* |
| СА1-СА2 (Hipp) | Vehicle(39-47)(86-93)(97-105)(147-154)(155-164)(167-176) | 2782±21.12737±14.42843±20.2\*2828±16.32762±11.72753±15.32819±18.8 | 83.6±0.6875.5±0.69\*\*74.1±0.87\*\*75.0±0.60\*\*69.3±0.40\*\*84.1±0.4489.5±0.49\*\* | 2.2±0.252.6±0.291.0±0.22\*\*1.7±0.171.7±0.252.3±0.211.9±0.21 | 9.6±0.4313.9±0.39\*\*14.7±0.54\*\*13.9±0.36\*\*16.0±0.34\*\*10.5±0.324.6±0.20\*\* | 3.5±0.292.6±0.295.8±0.45\*\*4.1±0.288.0±0.24\*\*2.1±0.21\*2.4±0.22\* | 1.2±0.174.7±0.23\*\*4.4±0.25\*\*5.4±0.21\*\*5.0±0.28\*\*1.8±0.191.7±0.18 |
| СА3-СА4 (Hipp) | Vehicle(39-47)(86-93)(97-105)(147-154)(155-164)(167-176) | 2123±20.452118 ± 8.62028±17.9\*\*2091±12.92002±11.6\*\*2042±14.5\*2131±13.0 | 82.1±0.6376.5±0.39\*\*67.2±0.58\*\*77.4±0.50\*\*66.7±0.51\*\*82.5±0.4090.7±0.43\*\* | 2.1±0.243.1±0.24\*1.1±0.24\*1.6±0.172.2±0.212.8±0.201.9±0.17 | 10.3±0.4413.9±0.29\*\*16.7±0.31\*\*13.0±0.28\*\*16.8±0.3\*\*11.9±0.3\*4.4±0.28\*\* | 3.9±0.402.7±0.29\*5.3±0.984.0±0.199.4±0.22\*\*2.1±0.35\*\*2.1±0.20\*\* | 1.6±0.193.6±0.19\*\*5.6±0.32\*\*3.9±0.23\*\*4.8±0.33\*\*2.5±0.22\*1.2±0.15 |

Notes: Statistical characterization (mean ± SEM) of SO-mice immunized against p75NTR fragments (shown in brackets), where stars denote significant (\*p < 0.05; \*\*р < 0.01, Mann-Whitney U-test) difference versus the "Vehicle" (underlined) group. The hippocampus is abbreviated as Hipp.