

**S8 Table. NeuroCube results for the Cntnap2 knockout model.**

| Cntnap2          |                        | Genotype | P30   |      | P60   |      |
|------------------|------------------------|----------|-------|------|-------|------|
|                  |                        |          | Mean  | SE   | Mean  | SE   |
| Length and Width | Stride Length (mm)     | WT       | 55.4  | 1.0  | 62.9  | 1.4  |
|                  |                        | KO       | 55.0  | 0.5  | 63.0  | 1.1  |
|                  | Front Base (mm)        | WT       | 14.8  | 0.3  | 15.3  | 0.2  |
|                  |                        | KO       | 14.4  | 0.3  | 15.1  | 0.3  |
|                  | Hind Base (mm)         | WT       | 25.0  | 0.4  | 25.6  | 0.4  |
|                  |                        | KO       | 23.0  | 0.2  | 23.7  | 0.3  |
| Movement         | Speed                  | WT       | 187.8 | 9.8  | 209.2 | 12.7 |
|                  |                        | KO       | 233.3 | 7.5  | 266.1 | 10.8 |
|                  | Stride Duration        | WT       | 337.6 | 16.3 | 333.0 | 11.3 |
|                  |                        | KO       | 256.6 | 6.2  | 264.9 | 8.4  |
|                  | Stance Duration        | WT       | 132.8 | 7.6  | 136.4 | 5.4  |
|                  |                        | KO       | 100.9 | 3.6  | 102.4 | 4.1  |
|                  | Swing Percent          | WT       | 60.5  | 1.3  | 58.9  | 0.8  |
|                  |                        | KO       | 60.7  | 1.1  | 61.2  | 1.0  |
| Paw Measurements | Front Paw Area         | WT       | 165.8 | 3.3  | 175.6 | 4.3  |
|                  |                        | KO       | 166.7 | 4.8  | 177.8 | 4.7  |
|                  | Hind Paw Area          | WT       | 138.9 | 3.2  | 154.8 | 4.5  |
|                  |                        | KO       | 143.4 | 2.5  | 152.3 | 3.8  |
|                  | Front Paw Intensity    | WT       | 69.6  | 1.0  | 79.0  | 1.1  |
|                  |                        | KO       | 65.7  | 1.2  | 75.2  | 1.0  |
|                  | Hind Paw Intensity     | WT       | 78.3  | 1.5  | 92.0  | 1.4  |
|                  |                        | KO       | 73.8  | 2.2  | 88.4  | 2.3  |
| Weight & Bias    | Body Weight            | WT       | 15.8  | 0.4  | 22.3  | 0.5  |
|                  |                        | KO       | 14.9  | 0.6  | 21.5  | 0.3  |
|                  | Hind Weight Bias       | WT       | 1.1   | 0.02 | 1.2   | 0.02 |
|                  |                        | KO       | 1.1   | 0.02 | 1.2   | 0.02 |
|                  | Left Hind Weight Bias  | WT       | 1.1   | 0.02 | 1.1   | 0.03 |
|                  |                        | KO       | 1.1   | 0.04 | 1.1   | 0.04 |
|                  | Left Front Weight Bias | WT       | 1.0   | 0.01 | 1.0   | 0.01 |
|                  |                        | KO       | 1.0   | 0.01 | 1.0   | 0.01 |