**Supplementary file 1. Statistics table.**

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| --- | --- | --- | --- | --- | --- |
| Figure | N (experimental replicates) | n (biological replicates) | Normality test pass | Statistical test | p-value |
| 1 G  | 3 | > 13 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\* 0.0078\*\*\*\* 0.003NS > 0.9999 |
| 1 H | 3 | > 13 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.1397NS 0.0900NS > 0.9999 |
| 1 J | 3 | > 25 | Yes | One way ANOVA | \* 0.0183\*\* 0.0068NS 0.648 |
| 1 K | 3 | > 24 | Yes | One way ANOVA | \*\* 0.0024\*\*\* 0.0003NS 0.3312 |
| 2 B  | 3 | > 5  | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.0301; 0.0372\*\* 0.0013NS > 0.9999 |
| 2 D | 3 | > 10  | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.0243\* 0.0134\*\*\* 0.0006NS > 0.9999 |
| 3 H | 3 | > 8 DIV 8 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | MDGA1\*\*\*\* < 0.0001 |
| > 12 DIV 10 |
| > 11 DIV 14 | MDGA2\*\*\*\* < 0.0001 |
| NS > 0.9999 |
| 4 B  | 3 | > 9  | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\*\* 0.0069\*\*\* 0.0012NS 0.9025 |
| 4 D | 3 | > 5  | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.0355NS > 0.9999NS 0.1016 |
| 5 C  | 3 | > 16 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.8059NS > 0.999 |
| 5 F | 3 | > 8 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.0265NS 0.999NS 0.7205 |
| 6 B | 3 | > 4 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.3185NS > 0.9999NS 0.2004 |
| 6 D | 3 | > 7 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.3394NS 0.9999NS 0.457 |
| 6 F | 7 | - | No | t-test Mann Whitney test | \*\*\* 0.0006 |
| 6 G | 7 | - | No | t-test Mann Whitney test | NS 0.4042 |
| 7 C | 3 | > 12 | Yes | Unpaired t test | \*\* 0.0030 |
| 7 G | 3 | > 12 | yes | Unpaired t test | \*\* 0.0026 |
| 8 B | 3 | > 17 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\*\* 0.0006\*\*\* 0.0002NS > 0.9999 |
| 8 C | 3 | > 17 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.0693NS 0.6752NS 0.0650 |
| 8 D | 3 | > 17 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.2199\*\* < 0.0025NS 0.9999 |
| 8 E | 3 | > 17 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.999 |
| 8 G | 5 | > 7 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.9999 |
| 8 H | 5 | > 7 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.0374\*\* 0.0055NS > 0.9999 |
| 9 C | 3 | 5-15 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.1226\* 0.0349 |
| 9 D | 3 | 5-15 | No | ANOVA Kruskal Wallis;Dunn´s multiple comparison test | NS > 0.9999NS > 0.9999 |
| 9 E | 3 | 5-15 | No | Wilcoxon matched-pairs signed rank test;Paired t-test | NS 0.8125\*\*\* 0.0005\* 0.0342 |
| Supplemental  |  |  |  |  |  |
| 1 – S1A | 3 | - | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999 |
| 1 – S1B | 3 | - | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999 |
| 1 – S1D | 3 | - | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.8175 NLGN1NS 0.225 NLGN2NS 0.225 NLGN3NS 0.175 gephyrin\* 0.0458 PSD-95NS 0.0513 MDGA1NS 0.225 GluA1 |
| 1 – S3B | 2 | > 58 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999NS 0.0677NS 0.0511 |
| 1 – S3C | 2 | > 41 | Yes | One Way ANOVA | NS 0.0659NS 0.1626\*\*\* 0.0002 |
| 1 - S3D | 2 | > 41 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.9417NS 0.3631NS > 0.9999 |
| 1 - S3E | 2 | > 41 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.3047NS 0.6689NS > 0.999 |
| 2 - S1C | 2 | - | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \* 0.022NS 0.0526NS 0.0515NS 0.791NS 0.6504NS > 0.9999NS 0.7584 |
| 2 - S1D | 2 | - | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.2782\*\* 0.0024\*\*\* 0.0007NS > 0.999NS 0.9678NS > 0.9999NS 0.3008 |
| 2 - S2C | 2 | > 42 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.894\*\*\*\* < 0.0001 |
| 2 - S2D | 3 | > 53 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\*\*\* < 0.0001\*\* 0.0058NS 0.3384 |
| 2 - S2E | 4 | - | No | Unpaired t test | \*\*\* 0.0002 |
| 5 - S1D  | 3 | > 81 DIV 8 | No | ANOVA Kruskal Wallis;Dunn´s multiple comparison test | NS 0.0876\*\*\*\* < 0.0001 |
| ­­> 12 DIV 10 | NS 0.3283\*\*\*\* < 0.0001NS 0.3899 |
| > 50 DIV 14 | \*\*\* 0.0006\*\* 0.0051NS > 0.9999 |
| 5 - S1E | 3 | > 81 DIV 8> 12 DIV 10> 58 DIV 14 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999 |
| 6 – S1B | 2 | > 12 | No | t-test Mann Whitney test | NS 0.501 |
| 8 - S1C | 3 | > 13 | No | t-test Mann Whitney test | \*\*\*\* < 0.0001 |
| 8 - S1E | 2 | > 25 | No | Mann Whitney test | NS 0.95 |
| 8 - S1F | 2 | > 25 | No | Mann Whitney test | NS 0.88 |
| 8 – S2B | 1 | 5 | N/A | Chi-square | \*\* 0.01 |
| 8 – S2C | 1 | 5 | N/A | Chi-square | \*\* 0.01 |
| 8 – S2E | 1 | 5 | No | Pearson’s correlation test | \*\*\* < 0.001 |
| 8 – S2F | 1 | 5 | No | Mann-Whitney | NS [0.09-0.99] |
| 8 – S2G | 1 | 5 | No | Mann-Whitney | NS [0.18-0.99] |
| 8 – S3B | 3 | > 99 | No | ANOVA Kruskal Wallis;Dunn´s multiple comparison test | NS 0.3686NS > 0.999 |
| 8 – S3C | 3 | > 99 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.1904NS 0.0663 |
| 8 – S3D | 3 | > 85 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\* 0.0096NS 0.1564 |
| 8 – S3E | 3 | > 79 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | \*\*\*\* < 0.0001 |
| 8 – S4B | 3 | > 33 | Yes | One way ANOVA | NS > 0.9999NS 0.9533NS > 0.9999 |
| 8 – S4C | 3 | > 33 | Yes | One way ANOVA | NS > 0.9999 |
| 8 – S4E | 3 | > 6 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999 |
| 8 – S4F | 3 | > 6 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999NS 0.8584NS > 0.9999 |
| 8 – S5B | 2 | > 9 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.999NS 0.6851NS > 0.9999 |
| 8 – S5C | 2 | > 9 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999\*\*\*\* 0.0059NS > 0.9999 |
| 8 – S5E | 2 | > 5 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.4464NS 0.3373NS > 0.999 |
| 8 – S5F | 2 | > 19 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS 0.3725\*\*\*\* < 0.0001NS > 0.9999 |
| 9 - S1A | 3 | 5-13 | Yes/No | Wilcoxon matched-pairs signed rank testPaired t-test | NS 0.8125\* 0.0171\* 0.0335 |
| 9 - S1B | 3 | 5-13 | Yes/No | Wilcoxon matched-pairs signed rank testPaired t-test | NS 0.625NS 0.1677NS 0.6195 |
| 9 - S1D | 3 | 5-29 | No | ANOVA Kruskal Wallis; Dunn´s multiple comparison test | NS > 0.9999 |