(A) Raw data for single cell analyses

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Genotypes | | WT | | | | | |
| Granule cells | | LCa | | EG | | CCe | |
| Tracing | Larva | Normal | Abnormal | Normal | Abnormal | Normal | Abnormal |
| 90A; UAS:Kaede | #1 | 0 | 0 | 0 | 0 | 5 | 0 |
| #2 | 0 | 0 | 8 | 0 | 11 | 0 |
| #3 | 3 | 0 | 10 | 0 | 0 | 0 |
| #4 | 2 | 0 | 9 | 0 | 0 | 0 |
| #5 | 0 | 0 | 1 | 0 | 0 | 0 |
| #6 | 4 | 0 | 0 | 0 | 5 | 0 |
| #7 | 2 | 0 | 9 | 0 | 5 | 0 |
| #8 | 3 | 0 | 2 | 0 | 2 | 0 |
| 152B; UAS:Kaede | #9 | 0 | 0 | 0 | 0 | 5 | 0 |
| #10 | 0 | 0 | 3 | 0 | 0 | 0 |
| #11 | 0 | 0 | 0 | 0 | 13 | 0 |
| Genotypes | | *siork18/rk18* (*col4a6rk18/rk18*) | | | | | |
| Granule cells | | LCa | | EG | | CCe | |
| Tracing | Larva | Normal | Abnormal | Normal | Abnormal | Normal | Abnormal |
| 90A; UAS:Kaede | #12 | 0 | 0 | 1 | 1 | 0 | 1 |
| #13 | 0 | 0 | 0 | 3 | 1 | 0 |
| #14 | 0 | 1 | 0 | 1 | 5 | 2 |
| #15 | 0 | 0 | 1 | 1 | 0 | 0 |
| #16 | 0 | 1 | 0 | 1 | 3 | 1 |
| #17 | 0 | 1 | 0 | 0 | 0 | 0 |
| #18 | 0 | 0 | 1 | 4 | 10 | 1 |
| 152B; UAS:Kaede | #19 | 0 | 0 | 1 | 0 | 10 | 0 |

(B) Statistic analysis

a: Granule cells in LCa

|  |  |  |  |
| --- | --- | --- | --- |
|  | Normal | Abnormal | Sum |
| WT | 14 | 0 | 14 |
| *siork18/rk18* | 0 | 3 | 3 |
| Sum | 14 | 3 | 17 |

*p*=0.001

b: Granule cells in EG

|  |  |  |  |
| --- | --- | --- | --- |
|  | Normal | Abnormal | Sum |
| WT | 42 | 0 | 42 |
| *siork18/rk18* | 4 | 11 | 15 |
| Sum | 46 | 11 | 57 |

*p*=0.000

c: Granule cells in CCe

|  |  |  |  |
| --- | --- | --- | --- |
|  | Normal | Abnormal | Sum |
| WT | 46 | 0 | 46 |
| *siork18/rk18* | 29 | 5 | 34 |
| Sum | 75 | 5 | 80 |

*p*=0.012