|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Transgene | Expressed insertions % | | | Total  # insertions | Comment |
| 0-20% | 20-80% | 80-100% |  |
| Or85a cluster\* | 0 | 0 | 6 | 6 | Expressed |
| Or59b cluster (10768-1)\*\* | 3 | 2 | 4 | 9 | Weak |
| Or59b cluster (13855-1)\*\* | 5 | 2 | 3 | 10 | Weak |
| 2×Or19a Onecut (M7)\* | 2 | 3 | 0 | 5 | Expressed |
| 2×Or19a One cut\*\* | 1 | 1 | 2 | 4 | Expressed |
| 6×Or19a Onecut (M4)\* | 5 | 4 | 1 | 10 | Expressed |
| 6×Or19a Onecut (M24)\* | 2 | 2 | 3 | 7 | Expressed |
| 6×Or19a One cut\*\* | 0 | 0 | 5 | 5 | Expressed |
| 2×Or85a Acj6 (12097-1)\*\* | 10 | 0 | 0 | 10 | Not expressed |
| 2×Or59b E-box (12590-1)\*\* | 6 | 0 | 0 | 6 | Not expressed |
| 2×Or19a Pdm3 (9579-3)\*\* | 10 | 0 | 0 | 10 | Not expressed |
| E Or59b cluster (10768-5)\*\* | 0 | 1 | 8 | 9 | Weak but ectopic |
| Or59b cluster (5bp) E (10768-2)\*\* | 1 | 1 | 7 | 9 | Weak but ectopic |
| Or59b cluster (10bp) E (10768-3)\*\* | 0 | 0 | 6 | 6 | Strong and ectopic |
| Or59b cluster (125bp) E (12290-5)\*\* | 10 | 0 | 0 | 10 | Not expressed |
| Or59b cluster synthetic1 (SOF8)\*\* | 5 | 0 | 0 | 5 | Not expressed |
| Or59b cluster synthetic2 (11585-1)\*\* | 6 | 0 | 0 | 6 | Not expressed |
| Or59b cluster synthetic3 (11585-2)\*\* | 8 | 0 | 0 | 8 | Not expressed |
| Or59b cluster synthetic4 (11585-3)\*\* | 6 | 0 | 0 | 6 | Not expressed |
| Or59b cluster mutated E-box (M15)\* | 6 | 0 | 0 | 6 | Not expressed |
| Or59b cluster mutated E-box (SOF 31)\*\* | 3 | 0 | 0 | 3 | Not expressed |
| Or59b cluster mutated Pou (SOF32)\*\* | 3 | 0 | 0 | 3 | Not expressed |
| Or59b cluster mutated Pdm3Hox (SOF33)\*\* | 0 | 0 | 3 | 3 | Strong and ectopic |
| Or59b cluster mutated Acj6Hox (SOF34)\*\* | 0 | 0 | 3 | 3 | Weak but ectopic |
| Or59b cluster+ E-box (10768-4)\*\* | 4 | 2 | 3 | 9 | Expressed |
| Or59b cluster+ E-box (13855-2)\*\* | 5 | 2 | 2 | 9 | Expressed |
| 2×Or59b cluster (6283-1)\*\*\* | 3 | 2 | 5 | 10 | Strong and ectopic |
| 2×Or59b cluster (M16)\* | 4 | 1 | 2 | 7 | Strong and ectopic |
| 2×Or59b cluster (13855-3)\*\* | 0 | 0 | 10 | 10 | Strong and ectopic |

**Supplemental Table 2, List of transgenic lines**

The number of insertions and their GFP expression status is presented. The percentages show the fraction of flies with detectable GFP expression. A total of 3-6 drosophila brains were dissected for each insertion. If GFP expression was detected in more than 30% of insertions it was considered as expressed.

\*HSP core promoter

\*\*Synthetic core promoter

\*\*\*Eve core promoter