**Table S1:** Identification and Sequence of *Daphnia*, *Tribolium* and *Drosophila* RCSI sites.

|  |  |  |
| --- | --- | --- |
| Gene (*Daphnia pulex*) | Sequence (5’-3’) | Distance From ATG (Met) |
| LOPB15 (2 sites) | TTCTA **TAAT** TCA **ATTA** TGACC | - 325 bp |
|  | ACATA **ATTA** ATT **TAAT** CAAAG | - 768 bp |
| LOPB11 | TCCTC **TAAT** TAA **ATTA** TGACT | -325 bp |
| LOPB9 | TTCTC **TAAT** TCA **ATTA** TGCCC | -326 bp |
| LOPB6 | ACCTA **TAAT** TCA **ATTA** TAATT | - 447 bp |
| LOPB1 | CCAAG **ATTA** CCT **TAAT** CGATA | -582 bp |
| LOB10 | TCCTC **TAAT** TAA **ATTA** TGACT | - 325 bp |
|  |  |  |
| Gbeta (JGI\_V11\_210534) | GTTAC **TAAT** TGA **ATTA** GGAGC | - 196 bp |
|  |  |  |

|  |  |  |
| --- | --- | --- |
| Gene (*Tribolium casteneum*) |  |  |
| LW opsin | GAAGA **TAAT** GTA **ATTA** GGTAG | - 238 bp |
| Gbeta (LOC662674 ) | AAAAC **TAAT** TAG **ATTA** CATGC | - 69 bp |
|  |  |  |
| LW mutant | GAAGA TGAC GTA ATCG GGTAG | Not Applicable |
|  |  |  |
| UV opsin | CGATT **TAAT** AAT **ATTA** AAACC | - 204 bp |

|  |  |  |
| --- | --- | --- |
| Gene (*Drosophila melanogaster*) |  |  |
| RH6 | TGCCC **TAAT** CCA **ATTA** GCCGG | -205 bp |
| Gbeta76C (2 overlapping sites) | GGC **TAAT** CCA **ATTA** GCTAA | -195 bp |
|  | TAGCT **TAAT** TGC **ATTA** CCG |  |
|  |  |  |
| P3 | TGGCC **TAAT** TGA **ATTA** CAAGA | Not Applicable |