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| --- | --- | --- |
| **Gene** | **Primer sequence (5’ -> 3’)** | **Purpose of primer pair** |
| *Obp8a* | 0F: TCGTAGGTCAGCAGCCCATTAC0R: TCGCATATGACTTTCAATCCGTGT1F: CGTGGGAATGATGCGGAGA1R: CATGGGCAGCATCCTCGAAT | 0: Sequencing CRISPR mutants1: RT-PCR |
| *Obp22a* | 2F: CCACTTTGTATTGGCAACCGCA2R: CAGTCCGCCCAACTTTGAGTTT3F: TGTACTTCTGCTTGGCCTCTC3R: TTTTGGAAGGATTCTGCACAC | 2: Sequencing CRISPR mutants3: RT-PCR |
| *Obp51a* | 4F: AGCAATCTCCCTCACGTGATAT4R: TGCGGCGCTCATGTTTCTTTTA5F: GGCCTGGTTCTGTTGTTAGC5R: TCAAGCACTGGAACACCAAG | 4: Sequencing CRISPR mutants5: RT-PCR |
| *Obp56e* | 6F: ACCTGACAACAAGAAATAACCCGC6R: CACTAGAGCAAGCGTTCCGTTC7F: CCCTTGCAGCTCTATCTTTGG7R: CTTGGTCGAGTCACACTTGG | 6: Sequencing CRISPR mutants7: RT-PCR |
| *Obp56f* | 8F: GGTAACAGTCCCTGGAAACCGA8R: GCGCTTTGCCCGGAATAATCTT9F: TTCATTTTCATCTCTGCTATCTGG9R: GCCCAATTCACATTTTCCTG | 8: Sequencing CRISPR mutants9: RT-PCR |
| *Obp56g* | 10F: GTTAGAAACCTTGACAGTGGCA10R: ATGGGGTAGGCAGTGTATCCCT11F: AGGGCTACATTCGCATTGAC11R: ACCTGTCCAAATCCTTTTCG | 10: Sequencing CRISPR mutants11: RT-PCR |
| *Obp56i* | 12F: ACCTCCATTCGGGTATCTCGAC12R: GACTGAGTGATGCAAAGCACGT13F: TGCTGTGCATTATTGTTAGTCG13R: ACTCGTCATGGGATGTCTCG | 12: Sequencing CRISPR mutants13: RT-PCR |
| *Actin 5C* | F: AGCGCGGTTACTCTTTCACCACR: GTGGCCATCTCCTGCTCAAAGT | RT-PCR control gene |
| *D. ananassae Obp56g* | F: TGACTCTGCTGCTTAGCTGCR: GATCCTTGTCCACCTGAGCC |  |
| *D. pseudoobscura Obp56g* | F: GGAGCCGGAGACATAAGCAAR: GCAGGTTTCCTTTCGCATCC |  |
| *D. mojavensis Obp56g* | F: AGAAGCCCGAAATGACCCAGR: CTCCAGCTTCACCTCACCAG |  |
| *D. virilis Obp56g* | F: GCTGCTTCTCGGCTGTCTAAR: CCTTAGCTGGCGCATCCTTA |  |

**Table S3 (Supplementary file 3)**: Primer sequences used in this study.