Supplementary file 1. Oligonucleotide sequences of PCR primers.

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| Primer name | 5´ 3´ nucleotide sequence |
| **qRT-PCR** |  |
| Kr-h1-RTF | atgtttacgagatttcggttac |
| Kr-h1-RTR | atgtgggcttccatttgtttt |
| Jhi-1-RTF | accacatcttcatcacaacca |
| Jhi-1-RTR | tacaactcatccaagccctca |
| Jhi-26-RTF | gcggatacgaaccacat |
| Jhi-26-RTR | ggctccactgacacgat |
| Vg-RTF | gtcaatgaggatgaacaggga |
| Vg-RTR | gttggcgttagacacgagagg |
| Torso-RTF  | cgggcagataagcacaactc |
| Torso-RTR | gaggaaaggctcgtttgatg |
| Otk-RTF | gtgcgtgattcgttcgtt |
| Otk-RTR | ccttctactcgacttgtggg |
| Ddr-RTF | gtgtccgaggtcgcaaat |
| Ddr-RTR | cgataacatacgcctctgc |
| Wsck-RTF | gattggagtggtggcagtt |
| Wsck-RTR | tgtggttgccaagggtat |
| Egfr-RTF | gactatctgatgccctcaccgc |
| Egfr-RTR | aaccgcaaatcctttattccct |
| Ste20-like-RTF | ctcgccacgctactccaca |
| Ste20-like -RTR | tcatactccgccgacagg |
| Vegfr1-RTF | ttaggttgaaagattacccacg |
| Vegfr1-RTR | atctccagtacgctcgtgtc |
| Ror-like-RTF | tcacgcacgaatcagacg |
| Ror-like-RTR | tggcggcacaagcacta |
| Fgfr1-RTF | gtggcaacggcgtgtctt |
| Fgfr1-RTR | aactctgctcttctgcgtatca |
| Ros-RTF | tcccgctcgtgagtatga |
| Ros-RTR | tgattgagtgttccgtgctat |
| Igfr1-RTF | tgctgctgtgcctgctggtg |
| Igfr1-RTR | cggtgccgagtttccgatta |
| Inr-RTF | tcttggtacaccgtgaacatc  |
| Inr-RTR | actacgaagccgttggggttctgag |
| Dnt-RTF | cgagaaactaaggctgaaggtg |
| Dnt-RTR | gccagaggtgatgctccaag |
| Drl-RTF | agatgcgagggagcaagaagt |
| Drl-RTR | gctaacacccaggaccgacag |
| Cad96ca-RTF | ttcaacctacccgccatca |
| Cad96ca-RTR | tctccaacccataagtcacag |
| Alk-RTF | aagaaggcggtgatagacgatt |
| Alk-RTR | tgactgttggacgaggaggac |
| Nrk-RTF | ggactacagccaagtaaccac |
| Nrk-RTR | gaggtcttgtatgctgatgagggta |
| Ror-RTF | acacgccgcaaaggagac |
| Ror-RTR | ccgttggaagaggagcag |
| Ephb2-RTF | cagtgctggagacaaccttcg |
| Ephb2-RTR | tcggctgtttcttatcacattca |
| Eddr-RTF | atgcgacctgtcaccttccttg |
| Eddr-RTR | tgccgctttcacttcgttatgg |
| **RNAi** |  |
| Fgfr1-RNAiF | gcgtaatacgactcactatagggagcgtcactgaacgagag |
| Fgfr1-RNAiR | gcgtaatacgactcactatagggaaacgtggagggaaatat |
| Vegfr1-RNAiF | gcgtaatacgactcactatagggttgcctcacttcagcc |
| Vegfr1-RNAiR | gcgtaatacgactcactatagggtttcgcactttccacg |
| Wsck-RNAiF  | gcgtaatacgactcactataggg tttctgtgggaatgcg |
| Wsck-RNAiR  | gcgtaatacgactcactatagggggctggggtctggagt |
| Drl-RNAiF | gcgtaatacgactcactataggggagtggacttgccttgtacg |
| Drl-RNAiR | gcgtaatacgactcactatagggtcagctctgctatcctttgt |
| Cad96ca-RNAiF | gcgtaatacgactcactataggggtctacgccacagtctccga |
| Cad96ca-RNAiR | gcgtaatacgactcactatagggcgtctttcttgctatccttc |
| Ror-RNAiF | gcgtaatacgactcactatagggggcgtgtatttattgttt |
| Ror-RNAiR | gcgtaatacgactcactatagggggtgccattagtcttatc |
| Ephb2-RNAiF | gcgtaatacgactcactatagggatacccactggctcctgt |
| Ephb2-RNAiR | gcgtaatacgactcactatagggcattctcggcgtaaactt |
| Nrk-RNAiF | gcgtaatacgactcactatagggttatcgtgcttcttctta |
| Nrk-RNAiR | gcgtaatacgactcactatagggatgttgtggttacttggc |
| Ste20-like-RNAiF | gcgtaatacgactcactataggggcagaaaagacctacacagc |
| Ste20-like-RNAiR | gcgtaatacgactcactatagggcaggcaagtaacgtcacaac |
| **Overexpression** |  |
| Nrk-oveF | gattctagagctagcgaattcgccaccatggacattcactttaa |
| Nrk-oveR | tcgtcgctctccatagcggccgcttcaggatgagttctttccaatatca |
| Otk-oveF | gattctagagctagcgaattcgccaccatggtgatgtgcgtgattcgttcgttc |
| Otk-oveR | tcgtcgctctccatagcggccgcctcttcgactttctcctgagatttc |
| Cad96ca-oveF | gattctagagctagcgaattcgccaccatggtgatgtttctgacaagc |
| Cad96ca-oveR | tcgtcgctctccatagcggccgctagtttttctccatccaagtgctg |
| Fgfr1-oveF | gattctagagctagcgaattcgccaccatgaatctcgccg |
| Fgfr1-oveR | tcgtcgctctccatagcggccgctttgatgaaaggaaagtcactgtca |
| **Mutant** |  |
| Cad96ca-M1-F | gattctagagctagcgaattcgccaccatggtgagggtgtaccgtgaag |
| Cad96ca-M1-R | tcgtcgctctccatagcggccgctagtttttctccatccaagtgctg |
| Cad96ca-M2-F | gattctagagctagcgaattcgccaccatggtgtgggtgacagcatacg |
| Cad96ca-M2-R | tcgtcgctctccatagcggccgctagtttttctccatccaagtgctg |
| Cad96ca-M3-F | gattctagagctagcgaattcgccaccatggtgaggacgactcaaagca |
| Cad96ca-M3-R | tcgtcgctctccatagcggccgctagtttttctccatccaagtgctg |
| Cad96ca-M4-F | gattctagagctagcgaattcgccaccatggtgacagaagctcctaata |
| Cad96ca-M4-R | tcgtcgctctccatagcggccgctagtttttctccatccaagtgctg |
| Fgfr1-M1-F | gattctagagctagcgaattcgccacctgtaagactgataat |
| Fgfr1-M1-RFgfr1-M2-FFgfr1-M2-R | tcgtcgctctccatagcggccgctttgatgaaaggaaagtcactgtcagattctagagctagcgaattcgccacccaccctacaaaacttttcgtcgctctccatagcggccgctttgatgaaaggaaagtcactgtca |
| Fgfr1-M3-F | gattctagagctagcgaattcgccaccgctgaaaacttgaccg |
| Fgfr1-M3-R | tcgtcgctctccatagcggccgctttgatgaaaggaaagtcactgtca |
| Fgfr1-M4-F | gattctagagctagcgaattcgccaccggatacttgactgtat |
| Fgfr1-M4-R | tcgtcgctctccatagcggccgctttgatgaaaggaaagtcactgtca |
| Crispr-Cas9 mutant |  |
| Universal primer | aaaagcaccgactcggtgccactttttcaagttgataacggactagccttattttaacttgctatttctagctctaaaac |
| Cad96ca-gRNA1 | taatacgactcactataggaagggtaatgttggtggggttttagagctagaa |
| Cad96ca-gRNA2 | taatacgactcactatagggtatcatcaggaggattgttttagagctagaa |
| Cad96ca-gRNAF1 | aagtggaagggtaatgttggtggggt |
| Cad96ca-gRNAR1 | taaaaccccaccaacattacccttcc |
| Cad96ca-gRNAF2 | aagtgggtatcatcaggaggattgt |
| Cad96ca-gRNAR2 | taaaacaatcctcctgatgataccc |
| Cad96ca-testF | gacagaagtctacgccaca |
| Cad96ca-testRFgfr1-gRNA1Fgfr1-gRNA2Fgfr1-gRNAF1Fgfr1-gRNAR1Fgfr1-gRNAF2Fgfr1-gRNAR2Fgfr1-testFFgfr1-testRgRNAwf-FgRNAwf-RMet1-gRNAMet1-testFMet1-testR | gcatacaaacaggatcacataatacgactcactatagggaggctgcgactgacctggttttagagctagaataatacgactcactataggagcagagttgtgcagcaggttttagagctagaaaagtgagaggctgcgactgacctggttaaaaccaggtcagtcgcagcctctcaagtagagcagagttgtgcagcaggttaaaacctgctgcacaactctgctctacccaataaacaacctca ctggtccttctactatacttac tgattacgaattcccgggaggttatgtagtacacattggtgttttacgcgcccgggaaaaaaagcaccgactcggttaatacgactcactatagaggggccccgaggcctattgttttagagctagaaatgacatcttcaggcggagctatatcggacaacaaaga |
| **HEK-239T**OverexpressionCad96ca-W-FCad96ca-W-RCad96ca-M1-FCad96ca-M1-RCad96ca-M2-FCad96ca-M2-RCad96ca-M3-FCad96ca-M3-RCad96ca-M4-FCad96ca-M4-RFgfr1-W-FFgfr1-W-RFgfr1-M1-FFgfr1-M1-RFgfr1-M2-FFgfr1-M2-RFgfr1-M3-FFgfr1-M3-RFgfr1-M4-FFgfr1-M4-R***S. frugiperda*****qRT-PCR**Cad96ca-RTFCad96ca-RTRFgfr-RTFFgfr-RTRKr-h1-RTFKr-h1-RTR**RNAi**Cad96ca-RNAiFCad96ca-RNAiRFgfr-RNAiFFgfr-RNAiR***D. melanogaster*****qRT-PCR**Cad96ca-RTFCad96ca-RTRHtl-RTFHtl-RTRBtl-RTFBtl-RTRKr-h1-RTFKr-h1-RTR**RNAi**Cad96ca-RNAiFCad96ca-RNAiRHtl-RNAiFHtl-RNAiRBtl-RNAiFBtl-RNAiR | ctcgagaccatggtggaattcatgtttctgacaagcgtctgggctcgcccttgctcatggtacctagtttttctccatccaagtgctgctcgagaccatggtggaattcagggtgtaccgtgaaggcagtctcgcccttgctcatggtacctagtttttctccatccaagtgctgctcgagaccatggtggaattctgggtgacagcatacgacggcctcgcccttgctcatggtacctagtttttctccatccaagtgctgctcgagaccatggtggaattcaggacgactcaaagcactaccctcgcccttgctcatggtacctagtttttctccatccaagtgctgctcgagaccatggtggaattcacagaagctcctaataagaatctcgcccttgctcatggtacctagtttttctccatccaagtgctgctcgagaccatggtggaattcatgaatctcgccgccattgctcgcccttgctcatggtacctttgatgaaaggaaagtcactgtca ctcgagaccatggtggaattctgtaagactgataatgataatgctcgcccttgctcatggtacctttgatgaaaggaaagtcactgtca ctcgagaccatggtggaattccaccctacaaaactttacaaaatctcgcccttgctcatggtacctttgatgaaaggaaagtcactgtca ctcgagaccatggtggaattcgctgaaaacttgaccgttgtagctcgcccttgctcatggtacctttgatgaaaggaaagtcactgtca ctcgagaccatggtggaattcggatacttgactgtattggaatctcgcccttgctcatggtacctttgatgaaaggaaagtcactgtcatgaacttgaacttccctgccttcaccacgagaactcctatgctggctccagagtcgctttatccaggtcttccaccagttcatctgtcttcgtgatttcggttagcctccatttgtttttttgtgtgcgtaatacgactcactataggtgcctaccccagtttacctagcgtaatacgactcactataggccgttgtcccaagactcatagcgtaatacgactcactataggcgaaggaggatgaagggtggcgtaatacgactcactataggcgactggcattagcaaagctcaaggaaagtgccaccgaagtgcagcccaacaaatgaacaacatcaaggaaagtgccaccgaagtgcagcccaacaaatgaacaacatagtggctttgttccttttggacggttgttctctgcttctcgcctaccactgtgacatctgctttccatctccttcttgttcttgagcgtaatacgactcactatagggggagagcagagtggagaagcgtaatacgactcactataggcagggaacatagcgattgggcgtaatacgactcactatagggggagagcagagtggagaagcgtaatacgactcactataggcagggaacatagcgattgggcgtaatacgactcactataggggctacccttttgcgacttgcgtaatacgactcactataggcaccgtgtgctttctgctt |