**TABLE S1. Gene-specific primers used in this study.**

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| **Primers** | **Sequence ( 5′→3′)** | **Usage** |
| L*HDA1*-1 | GAAATCTCGAGGAAAATGCT | Deletion of *HDA1*Deletion of *HDA1*Deletion of *HDA1*Deletion of *HDA1*Plasmid constructionPlasmid constructionPlasmid constructionPlasmid constructionPlasmid constructionPlasmid constructionRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRRT—qPCRCHIPCHIPCHIPCHIPCHIPCHIP |
| L*HDA1*-2 | GTCATCACCGAAACGCGCGCTTAATCTGTTCGGCGTA |
| L*HDA1*-3 | AGAAAATACCGCATCAGGAAAGGAAAAACTGGCCATTAATAA |
| L*HDA1*-4 | GTAAGCATCCACTTTAATGTA |
| LpYX-*MEF1*-F | CCGGAATTCATGAGTGTCCAGAAAATGAT |
| LpYX-*MEF1*-R | ATCGAGCTCCTATTTCTTCGCTTGCTTCT |
| LYCp-*MEF1*-F | CTAGCTAGCATGAGTGTCCAGAAAATGAT |
| LYCp-*MEF1*-R | AAAACTGCAGCTATTTCTTCGCTTGCTTCT |
| LXM-*HDA1*-F | GAAGATCTATGGATTCTGTAATGGTTAAG |
| LXM-*HDA1*-R | GAAGATCTTCATTCTTCATCACTCCATTC |
| L qPCR-*MEF1*- F | ATGCTAATCAATGATGGTGCTA |
| L qPCR-*MEF1*- R | CTCTTAATGAGGTGGCGAAA |
| L qPCR-*HDA1*- F | CAGGTTATTGTTCCCGTTTG |
| L qPCR-*HDA1*- R | TCTTGGGTCCTCTGGATGTG |
| L qPCR-*ACT1*- F | ATGCAAACCGCTGCTCAA |
| L qPCR-*ACT1*- R | AGTTTGGTCAATACCGGCAGA |
| L qPCR-*ACO1*- F | GTTGACACCTTCTCCGCTAC |
| L qPCR-*ACO1*- R | TTACCACGACCAGTTGCTTC |
| L qPCR-*OYE2*- F | GGCTAACAACCCACAACACA |
| L qPCR-*OYE2*- R | GGATTTCAACACCATCGGCA |
| L chip-*MEF1*- F | CCCGGAATGAAGGAAAGAAA |
| L chip-*MEF1*- R | GAGGCACCCACATCATTTTC |
| L chip-*HDA1*- F | CTCGAGGAAAATGCTTCTTTC |
| L chip-*HDA1*- R | ATCCATGCTTAATCTGTTCGG |
| L chip-*ENA1*- F | GGTCTTTTCCTCTTATTCCG |
| L chip-*ENA1*- R | TCCTTAGTAGTTCCTTCGCC |
| L chip-*ACO1*- F | GAGAAATTAGTGCATACGAG | CHIPCHIPCHIPCHIPConstruction of *HDA1+*Flag |
| L chip-*ACO1*- R | GCAGACAGCATTGTATATCT |
| L chip-*OYE2*- F | ATGCTTTTTCCGTCTCGTGT |
| L chip-*OYE2*- R | CTTGTGGCTTAAAGTCCTTA |
| L*HDA1+*Flag-up | TCGCAGCTGATGGATTCTGTAATGGTTAAG |
| L*HDA1+*Flag-down | ACGCGTCGACTCACTTGTCATCGTCGTCCTTGTAGTCTTCTTCATCACTCCATTCTTC | Construction of *HDA1+*Flag |
| L*HDA1*-intra | CAAACAATAGCCACCAATGC | Construction of *HDA1+*Flag |
| LKan-rec | GAAGGTTGCCGAAAAAAAATTATTAATGGCCAGTTTTTCCGCATAGGCCACTAGTGGAT | Amplification of*HDA1+*Flag+loxp-Kan-loxp cassette |
| LKan-RE | AAGCCGTTTCTGTAATGAAG | Amplification of*HDA1+*Flag+loxp-Kan-loxp cassette |
| *ATP1*-L1  | CTCATATATTCCCAAACAGG  | Deletion of *ATP1* |
| *ATP1*-L2：  | GTCATCACCGAAACGCGCTATTATATGTGCGTGTTTTTTTT  | Deletion of *ATP1* |
| *ATP1*-L3： | AGAAAATACCGCATCAGGAAATGTGAACTAAAAAAATAAAAATGA | Deletion of *ATP1* |
| *ATP1*-L4 | GGGCATTATTTACCATAAGAA | Deletion of *ATP1* |
| *ATP1*-up | CGCGGATCCATGTTGGCTCGTACTGCT | Plasmid construction |
| *ATP1*-down  | CCGCTCGAGTTAAAAAGTGGCAACAAATGAT | Plasmid construction |
| *ATP2*-L1   | TTCTTTATCTCTCCAGGACA | Deletion of *ATP2* |
| *ATP2*-L2  | GTCATCACCGAAACGCGCTCTTTTTTTTATTTTTGTTTTCTC  | Deletion of *ATP2* |
| *ATP2*-L3  | AGAAAATACCGCATCAGGAAAAAGAAATAAAGCTTAAACCAAG | Deletion of *ATP2* |
| *ATP2*-L4 | ATTATAGTCAGTCTTATAGAATA | Deletion of *ATP2* |
| *ATP2*-up | CCGGAATTCATGGTTTTGCCAAGACTATAT | Plasmid construction |
| *ATP2*-down  | CCGCTCGAGTTTCTTCTAGTTGGCTTCAG | Plasmid construction |
| *COR1*-L1  | GTCTTATTCGAGGAAAACAG | Deletion of *COR1* |
| *COR1*-L2 | GTCATCACCGAAACGCGCTTTTTTTGTTTATATATCTTGTG | Deletion of *COR1* |
| *COR1*-L3 | AGAAAATACCGCATCAGGAAAGATGTGTGATAATATATTTTCC | Deletion of *COR1* |
| *COR1*-L4 | ACTTTTGCAAGGAACAGTGA | Deletion of *COR1* |
| *COR1*-up | CGCGGATCCATGCTAAGAACAGTAACTTCA | Plasmid construction |
| *COR1*-down  | CCGCTCGAGTTACCATCTCATCATGGACA | Plasmid construction |
| *ILV5*-L1  | TTAATCGTACAAGAATCTTGG  | Deletion of *ILV5* |
| *ILV5*-L2  | GTCATCACCGAAACGCGCGTTTTATTTTTTACTTATATTGCT  | Deletion of *ILV5* |
| *ILV5*-L3 | AGAAAATACCGCATCAGGAAAAGAGGAAAATAATATCAAGTGC | Deletion of *ILV5* |
| *ILV5*-L4 | ATATTTGAAGCTGCTTCAGAA | Deletion of *ILV5* |
| *ILV5*-up | CGCGGATCCATGTTGAGAACTCAAGCCG | Plasmid construction |
| *ILV5*-down  | CCGCTCGAGTTATTGGTTTTCTGGTCTCAA | Plasmid construction |
| *PDB1*-L1  | GACTCTTGATATTATCTCTGT  | Deletion of *PDB1* |
| *PDB1*-L2  | GTCATCACCGAAACGCGCGTTGAACAAAATTATTGCAAAAG  | Deletion of *PDB1* |
| *PDB1*-L3 | AGAAAATACCGCATCAGGAAAATAAACTTCAATCCAATAGGAA | Deletion of *PDB1* |
| *PDB1*-L4 | GTGTATTTGCAGTTATATATCT | Deletion of *PDB1* |
| *PDB1*-up | CGCGGATCCATGTTTTCCAGACTGCCAA | Plasmid construction |
| *PDB1*-down  | CCGCTCGAGTTATTCAATTGACAAGACTTCTT | Plasmid construction |
| *POR1*-L1   | AATCAAACACCGCCATTTC  | Deletion of *POR1* |
| *POR1*-L2  | GTCATCACCGAAACGCGCTGTTGAGAGGTTGGTTTGAT  | Deletion of *POR1* |
| *POR1*-L3  | AGAAAATACCGCATCAGGAAAACGTATATATCTAATATATATATG  | Deletion of *POR1* |
| *POR1*-L4 | AGTCAGGAAGTGAGTCTATT | Deletion of *POR1* |
| *POR1*-up  | CGCGGATCCATGTCTCCTCCAGTTTACA | Plasmid construction |
| *POR1*-down  | CCGCTCGAGTCAAGCGTCGAAGGACAAAT | Plasmid construction |