Table S1. Primer pairs used to amplify the coding regions contain candidate variants

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Gene | Candidate variants | Primer orientation | Primer sequences | Product size (bp) |
| FGF8 | 29G>A | F | TGAGTTGCCTGCTGTTGC | 663 |
| R | TGAAGGGCGGGTAGTTGAG |
| 551G>A | F | GGGAGCCCCAGGGTGTCT | 423 |
| R | TGTGGGTGAAGGCCATGT |
| FGF10 | 68\_70del | F | CGGCTGCTGCTGCTGCTTTT | 560 |
| R | CCATTGGAAGAAAGTGAGCAGAG |

Table S2. Primer pairs used to screen of downstream target genes of FGF8 and FGF10

|  |  |  |
| --- | --- | --- |
| Gene | Primer orientation | Primer sequences |
| BMP15 | F | TGTGAACTCGTGCTTTTCATGG |
| R | CTCAATCAGGGGCAAAGTAGG |
| ER81 | F | CTGAACCCTGTAACTCCTTTCC |
| R | AGACATCTGGCGTTGGTACATA |
| FGF22 | F | GGGAGCGCATCGAAGAGAAC |
| R | CTGTGAGGCGTAGGTGTTGTG |
| FGFR2 | F | AGCACCATACTGGACCAACAC |
| R | GGCAGCGAAACTTGACAGTG |
| HDAC | F | CTACTACGACGGGGATGTTGG |
| R | GAGTCATGCGGATTCGGTGAG |
| NOTCH1 | F | GAGGCGTGGCAGACTATGC |
| R | CTTGTACTCCGTCAGCGTGA |
| PEA3 | F | GATGAAAGCCGGATACTTGGAC |
| R | TTCGCGCAAGCTCCCATTT |
| SOX2 | F | GCCGAGTGGAAACTTTTGTCG |
| R | GGCAGCGTGTACTTATCCTTCT |
| SOX9 | F | AGCGAACGCACATCAAGAC |
| R | CTGTAGGCGATCTGTTGGGG |
| SOX10 | F | CCTCACAGATCGCCTACACC |
| R | CATATAGGAGAAGGCCGAGTAGA |
| SNAIL | F | TCGGAAGCCTAACTACAGCGA |
| R | AGATGAGCATTGGCAGCGAG |
| TBX1 | F | ACGACAACGGCCACATTATTC |
| R | CCTCGGCATATTTCTCGCTATCT |
| TBX2 | F | CCCCTTCAAGGTGCGAGTC |
| R | TCAGCGGCTACAATGTCCATC |
| WNT3A | F | AGCTACCCGATCTGGTGGTC |
| R | CAAACTCGATGTCCTCGCTAC |
| WNT4 | F | AGGAGGAGACGTGCGAGAAA |
| R | CGAGTCCATGACTTCCAGGT |

Figure S1 Cardiac ultrasound results in patients. A and B Echocardiography of a patient with TOF labeled F150, C Echocardiography of a patient with single atrium and single ventricle labeled S033.



Figure S2 Screening of downstream target genes of FGF8 and FGF10. A and C Screening of downstream target genes of FGF8 in human cardiomyocytes and HEK293T cells, B and D Screening of downstream target genes of FGF10 in human cardiomyocytes and HEK293T cells (n = 3). GAPDH was used as an internal control.

