**S1 Table:**

List of primers used for the analysis of polymorphism of dispersed TCAST1 elements, for the analysis of expression of TCAST1-associated genes and for the analysis of histone methylation within regions flanking polymorphic TCAST1 elements.

|  |  |  |  |
| --- | --- | --- | --- |
| TCAST1 element | Primers for polymorphism analysis | Primers for expression of TCAST1 associated genes | Primers for ChIP  |
| 2 | F | GATGCACCTTGTTCGCACCTTTG  | F | CCAGACCATTTCGAGGATGT  | Up: CACGTCGTAGACAAGGCATTAG |
|  | R | AGGTCATGGCTTCCTAGCACCG | R | TTTATCGACGGAACGGACTC  | Up: AGAATCGCTCGTCTTTGTGTG |
| 4 | F | GAGAGCTTCTGTTTGGCATTAG | F | \*Pseudogene |  |
|  | R | CCTGAAATACCGACACGAAAG | R | / |  |
| 9 | F |  AAACACGTGCTAAAAGGGCTGAC  | F |  TGGTGGTCAGTGTCAAGGATCT  |  |
|  | R | CAAACGCTCGTTCAAATGCTTGC | R |  CAGGAGGGAGTGGTTGTCTTC  |  |
| 10 | F | CATCCCAAACAGGCAAGATAA | F |  TTCCTAGTTTATGAGGGCTTGATG |  |
|  | R |  TGGAGATCATGCGTTTACATTC | R |  TCCGAATTGCCATAGGATTGTC |  |
|  |   |   | F |  ATGACAAAAGGGCGTGCTAC |  |
|  |   |   | R |  GGCTGCATTCTCTCTGAACAT |  |
| 11 | F |  GCTTTAACGTGCTTTAGGACAA  | F | GTACCATATCCAGCAAGAAGTGAAC  |  |
|  | R | GCTCGAAATGAAACAGGAATAG  | R |  ATGTCCTTCTTCGTCCAACAGA  |  |
| 12 | F | CAGATTTCATGGAACTCATGGGC | F | GGCTGCTTCGAGGATATTAAAG |  |
|  | R | CCGGAAGAATTCAGAATACAGAAAGC | R | CAAAGCCATACATTTTCCTTCA |  |
| 13 | F | TGACCATTGACTATTGACTACGGA | F |  CAGCGAGCATATTAAACCTGTG  |  |
|  | R | CTGCCTGTATTACACAATTTCAACC  | R |  AATGGGAACGAACGATATAAGC  |  |
| 14 | F | GACTACCGAGAATATCTGTTCACAG | F |  AGACATTCTTGCACACCCGA |  |
|  | R | GAGGATCGATTACGGCCGTAT | R |  AACTCCATACCCACCCTTGAC |  |
| 15 | F | ATGCAAAGAGTACATGCTGTGA | F |  CTGTGCCATAATCCACCACTT |  |
|  | R | CGACCATCTAACACGACAAGAA | R |  GACGGAACATTCGACCATATCT |  |
| 17 | F | CGTCCGATTTACACTCAAACTCAC  | F |  GCCTGGTTATTACTGGAGGTTCT  |  |
|  | R | ATTAAACCGATTGAGAGAGGTTGGT  | R |  GGTTGAGGGTAACACGGATTT  |  |
| 21 | F |  GCTCGTCACTCCAATTAAGGTACA  | F |  CAGTTATGGTGCGAGTGTGTTT | Up: TTCTCTGTACCCTTCGAGCAA |
|  | R |  CTGGTCAAAAGGCCGAATATAA  | R |  GGAAAAGAACGTCATCCGAGTA | Up: ATTGGAGTGACGAGCATGTG |
| 23 | F |  CTTTGGATGGGTGTGGTAATCT | F |  ACTGACCCGAATACAGCTTTTCT  |  |
|  | R |  AAACGTGCAGATACTGTGGTTG | R |  GCACCTCGTTTTAGCAGTTCTC |  |
| 25 | F | ATTAGTGGTGATCGCACACG | F |  ACCTGTGGCTTTCAGTTTAGTTG |  |
|  | R | GCTAGATGGGAAACGTAAGAC | R |  CACCTCCACTACAAACCTTGAAC |  |
| 26 | F | AGGCTTCGAGTTTCTCCTTGT | F |  TTGAAGCTGGAGGATATGGAAAC  |  |
|  | R | AAGTGTCGATTTGTCCCAAGAC | R |  CTAAGCCGTTGATTAGGGTTGAG |  |
| 27 | F | GAACGAATCCTCACAAGGCTAC | F |  GCAAGGTAGACTGATTTTGAGAGA  |  |
|  | R | CGCAAGTGTTTTGAAGACCAG | R |  CCGATTGTGTAAGATTCCATGA |  |
| 28 | F | GTGTTCCTTTCGTGTCACACC  | F | \*Pseudogene |  |
|  | R | GCAATAATTGTGCCGAATGATACG  | R |   |  |
| 30 | F | GTCCAAGATTAACCACTTGATACC | F |  TAGTGCAACTGAGGTGGCTT |  |
|  | R | ATTGCATGTCGAAGCTGTTG | R |  AAGCGCAAGTGGAGGTATTTC |  |
| 32 | F | CCGTCGCGTAATGGCTGCGA | F |  TGCGCTGGTTATACTCGTCTT  |  |
|  | R | GCACACCCTTTGAGGTTCTGCCA | R |  CCAGTTTCAAGTCGGAGATATTG  |  |
| 33 | F | TGCAGATAGGAGGTGTTCTCAA | F |  TGAAGAACTGAACGGCGATATT  |  |
|  | R | GCCAAAGCCTATCCAACCTTAT | R |  CCGGATTGATTGATTTGTTGAG  |  |
| 34 | F | AGCCTAATTCGCAAGAACAGAC | F |  GCTCATGGGAGTTTTTCAATGT  |  |
|  | R | TCAGTCAGGTCAAGATCAGGTTT  | R |  GTATGAAGACGACAAATGCGAG  |  |
| 38 | F | / | F | \*Pseudogene |  |
|  | R | / | R |   |  |
| 39 | F | AATCCAAACGTCCATGCGTGTAT | F |  GACAATATCACACGTCCCATTCA |  |
|  | R | CAAATAAGGCATTGTAATGGCGG  | R |  ATTCTAGCCACGCAACGTATTT |  |
| 40 | F | TCACCTGAGGACGACCACTTT | F |  GGGCGAGTATGTTTGAATGTG  |  |
|  | R | GGAAGATTTGGAGAGTGATACCGAT  | R |  TAGACGTGAACGGGATTAGTCA  |  |
| 41 | F | CTCGCGGCTGTTAAGTGGC | F |  CTCAACTGCCGAATCAGAAACT  |  |
|  | R | CCGCGAAGAAATGCATGCGCT | R |  TATGTGGATCTGCCCACTGTTA |  |
| 42 | F |  GCTCGGCTATCCTTCTAGTTTG  | F |  GTACGCGAATGTCAACAGAAAG  |  |
|  | R |  AAATGGTAGCAGCGTTTCAACT  | R |  GAGCATTCCGCATCAAAGTC  |  |
| 44 | F |  AAGTGCTCGCAGTACCAAAAGT | F |  AAGTGCTCGCAGTACCAAAAGT  |  |
|  | R |  CAGAAGCTGTAATTCCCCTAGAAA | R |  TGATGTGATGGAAGGACACAAT |  |
| 46 | F | ACTCCCTGAGAAAAGTTGGAC | F |  GAGTTTGTCGATCCTGTCTCAAT | Up:TCTCACCCCTTCGACTACACTT |
|  | R | ACCAAAGACCAGTGATTCTATCG | R |  GCAATCCGAGCTGCAAGAATA | Up: GACACCCCTGTCCAACTTTTCT |
|  |  |  | F |  | Down: TAAACTGGGTAGCGCCCTCTT |
|  |  |  | R |  | Down:CTGAGTGTTTTCCCGCTCAAATA |
| 48 | F | ACTTCCTATGTTAGCCCAGTCAA | F |  GTACGATGGGACGGCTACAG  |  |
|  | R | CTCATCCTCCCACTTCTTCTGT | R |  TCCTTGGACAAACCGACATAA |  |
| 52 | F | GCAGGAAGTCCCACAAAACTAC | F |  GAAGCACTGTAAATGTCGATGTG  |  |
|  | R | ACTAACCACCACGCATTCTTTC | R |  AGTGGCTGCTGTTGCTTACA |  |
| 57 | F | CCGATTTTCCGTATCGTTTTAC  | F |  TTCCGCTCAGGACGAACTATAA |  |
|  | R | ATCCAGACGAAGATTATGCCAG  | R |  CAGACGAAGATTATGCCAGAGC |  |
| 58 | F | AATTCGGTTGAGGATGACAGTT | F |  ATACAGTTTTGAGCACGAATGC  |  |
|  | R | AGCAGCATGAATGTAGCATGAA | R |  AGGCCAGTTTGGATTATTACCAC  |  |
| 59 | F | GTGAGTAAGTGTGGCGTAATGTTT | F |  TTTTCCCGAGCAGTTACAAGAC  |  |
|  | R |  CAACATTCCAGGTTTCTTTCAC | R |  GATTCGGCACAGTTAAAACCAT |  |
| 67 | F |  TTTTGTCCGCAGGTGTACTATC  | F |  ATAGTTCTAGCGACGGGATTGA  |  |
|  | R |  AGCTCGAAGAGGGGGAATAG  | R |  CCACTTCTTGCACCGACTTTAT  |  |