**Supplementary Table 1. PCR primers used in this study.**

| Mouse genes | Forward primer | Reverse primer |
|-------------|----------------|----------------|
| Aicda       | 5'-AGAAAGTCACGCTGGAGACC-3' | 5'-CTCCTCTTCACCACGTAGCA-3' |
| Prdm1       | 5'-GCTGCTGGGCTGCCTTTGGA-3' | 5'-GGAGAGGAGGCGGTCCCTCCA-3' |
| Smad2       | 5'-GGCCGTCTTCTCAGCTTCAACAC-3' | 5'-CTGGGGTCTCAACTCTCTGAGT-3' |
| Smad3       | 5'-TGACAAAGTCTCACCACCAAGG-3' | 5'-CAGGCTTGGGTCCCTTAGGTA-3' |
| Smad4       | 5'-CGCTCAGGCCCTTAGTGTGTTG-3' | 5'-CTCTTGAGAGTGCTAGGCTTG-3' |
| Ira1        | 5'-TCCGGAGTTCTCAATCCTCAGAC-3' | 5'-TACTTGTGCTCTCCTGAGGT-3' |
| Traf6       | 5'-CTACCCGGTGGACCTGGGTTG-3' | 5'-CACCTCAAGCTGCTTGGT-3' |
| β-Actin     | 5'-CTAAGGGCAACCTGAAAGG-3' | 5'-ACCAGAGGCATACAGGGGCA-3' |
| Gapdh       | 5'-TTCACCACCATGGAGAAGGC-3' | 5'-GGCATGGACTGTGGTCATGA-3' |
| Germline transcripts | | |
| Iμ–Cμ | 5'-ACCTGGGAAATGTATGTTGTTGCTT-3' | 5'-GCAGGCAGGGCTAGATATGGG-3' |
| Iγ1–Cγ1 | 5'-CTTCCAAGGCAACAGGGCAGG-3' | 5'-ACCTTGAGGCTGGCTGACTT-3' |
| Ie–Cε | 5'-GACGGGCCACACCATCC-3' | 5'-CGGAGGTGGGATGGAG-3' |
| Iα–Ca | 5'-GCCATCAAGGCGAGGCCCTGGG-3' | 5'-TAATCGTGAATCAGGCAG-3' |
| Post-recombination transcripts | | |
| Iμ–Ca | 5'-ACCTGGGAAATGTATGTTGTTGCTT-3' | 5'-TAATCGTGAATCAGGCAG-3' |
| Circle transcript | | |
| Iα–Cμ | 5'-GCCATCAAGGCGAGGCCCTGGG-3' | 5'-GCAGGCAGGGCTAGATATGG-3' |
| miRNA and other small RNA forward primers (used with Qiagen miScript Universal Primer as reverse primer) | | |
| miR-146a | 5'-TGAGAACTGAAATTCCATGGGTTT-3' | |
| Snord68 | 5'-GCTGTACTGACTTGGATGA-3' | |
| Snord70 | 5'-TTTTGGAACTGAATCTAAGTGATTTT-3' | |
| Rnu6 | 5'-GCTTGGCCAGCACATAAATAAAAT-3' | |
| ChIP | | |
| Iα Promoter | 5'-CGCATCTCTGTCTCAGGGTC-3' | 5'-CTTGCCCTCCACGTATGTCT-3' |