### Supplementary Table 1. Features of the 27 DECs

| circRNA ID       | BestTranscript | Genesymbol | Annotation         | Chromosome | FC   | P-value     | Regulation |
|------------------|----------------|------------|--------------------|------------|------|-------------|------------|
| mmu_circ_000920  | NM_009032      | Rbm4       | INTERNAL, UTR3     | chr19      | 9.07 | 3.66E-02    | up         |
| mmu_circ_001520  | NM_001097617   | C1s1       | UTR5               | chr6       | 3.95 | 1.22E-05    | up         |
| mmu_circ_000700  | NM_175549      | Robo2      | INTERNAL           | chr16      | 3.68 | 2.10E-04    | up         |
| mmu_circ_001335  | NM_001081102   | Nsd2       | OVEXON, UTR5       | chr5       | 3.41 | 3.72E-02    | up         |
| mmu_circ_0001843 | NM_001114119   | Qrich1     | INTERNAL           | chr9       | 3.37 | 6.64E-03    | up         |
| mmu_circ_0001501 | NM_025829      | Eif4e3     | INTERNAL           | chr6       | 3.36 | 3.86E-03    | up         |
| mmu_circ_000514  | NM_032008      | Slmap      | INTERNAL           | chr14      | 2.79 | 3.41E-02    | up         |
| mmu_circ_0001061 | NM_013720      | Mga        | AINTERNAL          | chr2       | 2.66 | 2.62E-03    | up         |
| mmu_circ_000548  | NM_027436      | Mipep      | INTERNAL           | chr14      | 2.64 | 5.04E-04    | up         |
| mmu_circ_000237  | NM_001177629   | Grb10      | INTERNAL, UTR3     | chr11      | 2.64 | 8.61E-06    | up         |
| mmu_circ_0001609 | NM_008219      | Hbb-bh1    | UTR5               | chr7       | 2.58 | 1.23E-02    | up         |
| mmu_circ_000436  | NM_172120      | Vps41      | INTERNAL           | chr13      | 2.54 | 1.50E-02    | up         |
| mmu_circ_0001566 | NM_175473      | Fras1      | INTERNAL           | chr5       | 2.51 | 1.60E-03    | up         |
| mmu_circ_0001577 | None           | None       | INTERGENIC         | chr7       | 2.35 | 9.04E-05    | up         |
| mmu_circ_0001391 | NM_177078      | Grk3       | INTERNAL           | chr5       | 2.33 | 2.03E-02    | up         |
| mmu_circ_0001575 | NR_015351      | Ipw        | upstream_start     | chr7       | 2.29 | 1.66E-03    | up         |
| mmu_circ_000078  | None           | None       | INTERGENIC         | chr1       | 2.26 | 1.73E-02    | up         |
| mmu_circ_000123  | NM_007415      | Parp1      | INTERNAL           | chr1       | 2.16 | 3.19E-03    | up         |
| mmu_circ_0001105 | NM_015731      | Atip9a     | INTERNAL           | chr2       | 2.15 | 1.66E-02    | up         |
| mmu_circ_0001576 | None           | None       | INTERGENIC         | chr7       | 2.11 | 7.58E-04    | up         |
| mmu_circ_0001579 | None           | None       | INTERGENIC         | chr7       | 2.04 | 2.86E-03    | up         |
| mmu_circ_0001399 | NM_023625      | Plbd2      | INTERNAL           | chr5       | 2.04 | 9.70E-03    | up         |
| mmu_circ_000746  | NM_001199044   | Prrc2a     | INTERNAL, intronic | chr17      | 2.00 | 7.39E-04    | up         |
| mmu_circ_0001816 | None           | None       | INTERGENIC         | chr9       | -2.21| 3.37E-03    | down       |
| mmu_circ_0000607 | NM_001145888   | Zfat       | INTERNAL           | chr15      | -2.30| 4.69E-02    | down       |
| mmu_circ_0001815 | None           | None       | INTERGENIC         | chr9       | -2.40| 9.42E-04    | down       |
| mmu_circ_0001028 | NM_016866      | Stk39      | INTERNAL           | chr2       | -4.89| 3.02E-02    | down       |