**Supplementary Table 1**. The oligonucleotides for generating guide RNAs.

|  |  |  |
| --- | --- | --- |
| Gene target | Guide RNAs | Oligonucleotides sequence (5'-3') |
| *HSD1* | *sgRNA-DT1* | TTGTGTTTGACGGGGTCCA TGG |
|  | *sgRNA-DT2* | CTAGCAGCATATTTGGTCC TGG |
| *HSD2* | *sgRNA-DT3* | TCGACGAAGGATTAAGATC TGG |
|  | *sgRNA-DT4* | GCGGAGGTGGTGTTTCATA TGG |

**Supplementary Table 2**. Sequence of primers used in this study.

|  |  |  |  |
| --- | --- | --- | --- |
| Primer Name | | Sequence (5'-3') | Usage |
| *HSD1-DT1-BsFor*  *DT0-BsR2-Rev* | ATATATGGTCTCGATTGTTGTGTTTGACGGGGTCCAGTTTTAGAGCTAGAAATAGC  ATATTATTGGTCTCAATCTCTTAGTCGACTCTACCAAT | | These 6 primers are for generating the *CRISPR/Cas9-HSD1/2* transgene |
| *HSD1-DT2-BsFor*  *DT0-BsR3-Rev* | ATATTATTGGTCTCAAGATTGCTAGCAGCATATTTGGTCCGTTTTAGAGCTAGAAATAGC  ATATTATTGGTCTCATCACTACTTCGTCTCTAACCAT | |  |
| *HSD2-DT3-BsFor*  *HSD2-DT4-BsRev* | ATATTATTGGTCTCAGTGATTGTCGACGAAGGATTAAGATCGTTTTAGAGCTAGAAATAGC  ATTATTGGTCTCTAAACTATGAAACACCACCTCCGCCAATCACTACTTCGACTCTAGCTGTAT | |  |
| *Cas9-For*  *Cas9-Rev* | ATCCAATCTTCGGCAACAT  TATCCAGGTCATCGTCGTA | | Used for screening the transgene-free *hsd1/hsd2* mutants |
| *HSD1-For*  *HSD1-Rev* | AATCACCAGCTTCAGTACTC  ACCAGAGCATAATAGGTCAC | | For identifying the hsd1 mutations |
| *HSD2-For*  *HSD2-Rev* | CATTACACACCAAAGCAGTG  CCAACATCAACACAAGCATC | | For identifying the hsd2 mutations |
| *pLAT52-HSD2-For*  *pLAT52-HSD2-Rev* | TTACCATCGCGAGCGGTACCATGTCGCCGGCAGCTACGGA  AGGTCGACTCTAGAGGATCCGTCATGTTTCTTGCTTCCGA | | For generating the *pLAT52::HSD2-FLAG* transgene |