## Supplementary Table 28 List of primers for amplifying the correct *CoAtANS* transcriptional unit and the diagnostic primers used to confirm correct integration.

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| Primer number | Primer name | Sequence (5’ to 3’) |
| 18740 | SHR AL\_tFUM1\_fw | CTGACTCATTGCCATTGCATGTGCAGACTCAACACCATGACATCTTAATACAGAGGACGCTGCGGGTAATACTAGGTCC |
| 18741 | SHR DS\_pSeENO2\_rv | ATCAAGACTGAGGAGTACGTCAGGTTGCAGAGGATCACTTGTAATGAATGTGTGCTCGCTAACGCCAAGAAGATGCCG |
| 3537 | ilv5 flanking rv | AATCGTAGCTGTCCCGATGAGG |
| 17730 | 17730\_RPE1\_dg\_rv | GTGGTTTGGGCAAGGAGACAATC |
| 17973 | *coAtANS* diag rv | GGTTCCAAACCCAAACCAACAG |
| 17974 | *coAtANS* diag fw | GGCCAAAGACTCCATCTGAC |