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| **Supplementary File 3.** The differentially expressed lncRNAs in the mammary gland tissues between STH and GAM ewes   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **LncRNA** | **BaseMeanA1** | **BaseMeanB2** | **FoldChange** | **Log2FoldChange** | ***p*-value** | **Change3** | **Target gene** | | MSTRG.95989.3 | 516.2192651 | 0 | Inf4 | Inf | 3.20717E-05 | Up | *FOXN3* | | MSTRG.67542.1 | 839.5711864 | 66.1577454 | 12.69044435 | 3.66567068 | 0.000163544 | Up | *SH2D4A* | | MSTRG.61352.2 | 176.932952 | 0 | Inf | Inf | 0.000303891 | Up | *TRYPTASE-1* | | MSTRG.12659.4 | 398.491038 | 2.462539701 | 161.8211629 | 7.338256484 | 0.000335031 | Up | *HLF* | | MSTRG.67509.2 | 50.0115235 | 0 | Inf | Inf | 0.000422971 | Up | *FNTA* | | MSTRG.22606.2 | 47.15778133 | 0 | Inf | Inf | 0.001028274 | Up | *GNAS* | | MSTRG.344.2 | 215.0555372 | 0 | Inf | Inf | 0.001657726 | Up | *ENSOARG00000019151* | | MSTRG.70334.1 | 91.15273654 | 2.053588494 | 44.38705067 | 5.472066946 | 0.002300249 | Up | *SLC1A4* | | MSTRG.43574.1 | 216.2159322 | 0 | Inf | Inf | 0.002871139 | Up | *ENSOARG00000007799* | | MSTRG.83799.2 | 299.4578317 | 30.89215201 | 9.693653963 | 3.277040583 | 0.002944289 | Up | *ENSOARG00000007856* | | MSTRG.31339.1 | 198.7106188 | 4.021339721 | 49.41403427 | 5.62684894 | 0.003130775 | Up | *LCP2* | | MSTRG.39144.3 | 965.154443 | 0 | Inf | Inf | 0.004364443 | Up | *EXOC3L4* | | MSTRG.87828.1 | 301.5606598 | 30.8386541 | 9.778658263 | 3.289636525 | 0.005534646 | Up | *CAMK2D* | | MSTRG.27098.4 | 63.76223153 | 0.717872727 | 88.82108086 | 6.472830222 | 0.00605898 | Up | *BCAM* | | MSTRG.90061.1 | 75.2917101 | 5.835808984 | 12.90167487 | 3.68948646 | 0.011813264 | Up | *ENSOARG00000025179* | | MSTRG.103495.2 | 350.2467058 | 12.67748741 | 27.62745443 |  | 0.014879289 | Up | *HERC6* | | MSTRG.19103.1 | 471.4266202 | 61.85283557 | 7.621746293 | 2.930121586 | 0.014964308 | Up | *CACYBP* | | MSTRG.30356.1 | 665.9109682 | 146.1176971 | 4.557360138 | 2.188198382 | 0.015691982 | Up | *GDPD4* | | MSTRG.98304.2 | 134.363586 | 9.09858618 | 14.76752359 | 3.884356011 | 0.01717502 | Up | *MAP7* | | MSTRG.41118.1 | 878.5527215 | 0 | Inf | Inf | 0.021200055 | Up | *ENSOARG00000014113* | | MSTRG.61259.1 | 94.71947144 | 9.998595843 | 9.473277341 | 3.243863622 | 0.023838728 | Up | *MPG* | | MSTRG.23714.1 | 759.5604984 | 165.5194697 | 4.588949565 | 2.198163951 | 0.023906522 | Up | *SLC2A10* | | MSTRG.13234.6 | 292.7316287 | 61.16646097 | 4.785819287 | 2.258765922 | 0.02771559 | Up | *OMG* | | MSTRG.7526.1 | 3721.898477 | 682.792763 | 5.450992862 | 2.446519031 | 0.02800685 | Up | *ATP11B* | | MSTRG.41098.1 | 542.8258764 | 124.9937782 | 4.342823173 | 2.118633212 | 0.028171408 | Up | *PTPRG* | | MSTRG.6087.1 | 68.28880087 | 7.242699465 | 9.428639307 | 3.237049584 | 0.031537762 | Up | *NFKBIZ* | | MSTRG.50528.2 | 216.4492297 | 9.814828965 | 22.05328595 | 4.462921729 | 0.035995553 | Up | *ENSOARG00000019770* | | MSTRG.9822.4 | 554.8185553 | 123.6756775 | 4.48607654 | 2.165454235 | 0.046224908 | Up | *KCNJ15* | | MSTRG.64038.5 | 207.7536574 | 0 | Inf | Inf | 0.046432658 | Up | *PDGFA* | | MSTRG.83385.1 | 200.0809371 | 0 | Inf | Inf | 0.047273678 | Up | *ENSOARG00000012799* | | MSTRG.99147.2 | 191.2640273 | 32.41313486 | 5.900818545 | 2.560915095 | 0.049258736 | Up | *ESR1* | | MSTRG.32232.1 | 0 | 995.7194547 | 0 | -Inf | 1.40204E-06 | Down | *HSPB3* | | MSTRG.91173.1 | 0 | 61.1123632 | 0 | -Inf | 9.4694E-05 | Down | *CCDC96* | | MSTRG.42517.3 | 0 | 534.6935133 | 0 | -Inf | 0.000206474 | Down | *ENSOARG00000004795* | | MSTRG.95989.2 | 0.370835358 | 406.7727298 | 0.000911652 | -10.09922844 | 0.000250841 | Down | *FOXN3* | | MSTRG.64052.1 | 127.8384967 | 1377.292323 | 0.09281871 | -3.429440542 | 0.000267853 | Down | *UNCX* | | MSTRG.88204.2 | 10.0484197 | 157.2902505 | 0.063884568 | -3.968388716 | 0.001094048 | Down | *UBE2D3* | | MSTRG.15907.3 | 0 | 87.32420552 | 0 | -Inf | 0.002653119 | Down | *MRPL38* | | MSTRG.75667.3 | 550.6905066 | 7351.182814 | 0.074911823 | -3.738662757 | 0.003018024 | Down | *LARGE* | | MSTRG.53145.1 | 0 | 127.5991183 | 0 | -Inf | 0.006221646 | Down | *ENSOARG00000009395* | | MSTRG.37036.16 | 1638.806793 | 9387.059614 | 0.174581483 | -2.518027544 | 0.006809082 | Down | *MFGE8* | | MSTRG.19900.1 | 0.994871793 | 41.03258721 | 0.024245895 | -5.366115692 | 0.009149341 | Down | *DDX59* | | MSTRG.66946.3 | 58.6187233 | 1112.983702 | 0.052668088 | -4.24692711 | 0.009504136 | Down | *RBPMS* | | MSTRG.85066.1 | 0.624036435 | 34.46475798 | 0.018106509 | -5.78734781 | 0.01207136 | Down | *ZFP62* | | MSTRG.103772.1 | 85.33949226 | 539.3722455 | 0.158220029 | -2.659995855 | 0.013362456 | Down |  | | MSTRG.63876.1 | 70.24041023 | 432.5900529 | 0.162371765 | -2.622627316 | 0.013648528 | Down | *AMZ1* | | MSTRG.77261.2 | 0 | 39.38495448 | 0 | -Inf | 0.015655729 | Down | *TEAD4* | | MSTRG.79806.1 | 55.25446834 | 798.1335821 | 0.0692296 | -3.852467185 | 0.016634487 | Down | *NAMPT* | | MSTRG.71740.1 | 104.5662596 | 528.3726314 | 0.19790249 | -2.337138328 | 0.017288154 | Down |  | | MSTRG.92008.1 | 45.24191368 | 242.9671495 | 0.186205887 | -2.425029407 | 0.018337836 | Down | *SERINC5* | | MSTRG.82051.1 | 4.450024296 | 52.11916667 | 0.085381724 | -3.549928899 | 0.019751763 | Down | *KIAA1147* | | MSTRG.65717.10 | 249.1826948 | 1425.713489 | 0.174777539 | -2.516408303 | 0.020364595 | Down | *ENSOARG00000007679* | | MSTRG.32020.2 | 0 | 1297.611012 | 0 | -Inf | 0.020604769 | Down | *PDE4D* | | MSTRG.52863.1 | 35.41499411 | 235.7410898 | 0.150228346 | -2.734771036 | 0.02171334 | Down | *TNFRSF21* | | MSTRG.41120.2 | 0 | 660.2364933 | 0 | -Inf | 0.023118045 | Down | *ENSOARG00000014113* | | MSTRG.22606.1 | 7.377615674 | 81.21383655 | 0.090841856 | -3.460499002 | 0.023319693 | Down | *ENSOARG00000004809* | | MSTRG.54158.3 | 0 | 21.89809809 | 0 | -Inf | 0.025320483 | Down | *RREB1* | | MSTRG.100632.1 | 21.67112039 | 163.6526465 | 0.132421448 | -2.916791286 | 0.028076809 | Down | *PTK2* | | MSTRG.42633.1 | 0 | 18.79126287 | 0 | -Inf | 0.033605958 | Down | *TMEM18* | | MSTRG.56367.1 | 7.022416911 | 71.13175411 | 0.098724079 | -3.340454186 | 0.033799576 | Down | *RNASEH2C* | | MSTRG.73341.1 | 3.246150897 | 43.22484001 | 0.0750992 | -3.735058654 | 0.036542779 | Down | *TMCC3* | | MSTRG.91073.1 | 14.82337513 | 92.35438404 | 0.160505376 | -2.639306476 | 0.036857374 | Down | *BST1* | | MSTRG.75667.2 | 7.488437218 | 1477.074324 | 0.005069777 | -7.623862037 | 0.038208511 | Down | *LARGE* | | MSTRG.105947.3 | 294.0797768 | 2322.949595 | 0.126597571 | -2.981678368 | 0.041881808 | Down | *CYTB* | | MSTRG.23883.3 | 0 | 23.28535828 | 0 | -Inf | 0.043359187 | Down | *CEBPB* | | MSTRG.68472.1 | 130.7846868 | 462.3533334 | 0.282867403 | -1.82180216 | 0.043748442 | Down | *PHYHD1* | | MSTRG.65192.1 | 9.27088395 | 63.26181921 | 0.146547856 | -2.770556237 | 0.045982898 | Down | *SLC29A3* | | MSTRG.76074.1 | 0 | 129.3115898 | 0 | -Inf | 0.046582879 | Down | *PTHLH* | |

1 BaseMean is used to homogenize the expression of the gene in both the total sample and the single sample in the DEGSeq R package (Wang et al., 2010). BaseMean A is the BaseMean value in mammary gland of STH ewes.

2 BaseMean B is the BaseMean value in mammary gland of GAM ewes.

3 The difference in the expression of a specific lncRNA in the mammary gland tissue of STH ewes, compared to the mammary gland of GAM ewes.

4 Represents infinity.