

Supplementary Table 11: Differential mRNA expression ($q < 0.05$) of genes with a corresponding change in DNA methylation ($P < 0.05$ and absolute DNA methylation difference $\geq 3\%$) of the nearest gene, in human pancreatic islets exposed to palmitate versus control.

| Gene symbol | Chr | mRNA expression | | | | | | DNA methylation (%) | | | | | | |
|-----------------|-----|-----------------|-----------------------|-------------------------|---------------------------|---------|---------|---------------------|-------------------|-------------------|-----------------------|-------------------------|---------------------------|---------|
| | | Probe ID | Control mean \pm sd | Palmitate mean \pm sd | Diff. palmitate - control | P-value | q-value | Probe ID | Gene region | CpG island region | Control mean \pm sd | Palmitate mean \pm sd | Diff. palmitate - control | P-value |
| <i>ABLIM1</i> | 10 | 7936463 | 494.1 \pm 130.0 | 427.5 \pm 97.7 | -66.6 | 0.0002 | 0.013 | cg19226626 | Body | Open sea | 71.7 \pm 6.3 | 75.4 \pm 5.4 | 3.7 | 0.0374 |
| <i>ACSS3</i> | 12 | 7957386 | 141.6 \pm 57.9 | 105.4 \pm 44.3 | -36.2 | 0.0002 | 0.013 | cg19981475 | Body | Open sea | 49.5 \pm 11.4 | 53.6 \pm 12.9 | 4.1 | 0.0477 |
| <i>ADAM19</i> | 5 | 8115490 | 46.1 \pm 8.8 | 38.4 \pm 4.8 | -7.6 | 0.0017 | 0.033 | cg07257747 | Body | Open sea | 58.8 \pm 3.8 | 62.1 \pm 5.3 | 3.4 | 0.0253 |
| <i>ADAM28</i> | 8 | 8145293 | 96.6 \pm 48.4 | 66.5 \pm 28.9 | -30.1 | 0.0002 | 0.013 | cg22915945 | 1stExon; 5'UTR | Open sea | 53.8 \pm 5.3 | 57.2 \pm 4.4 | 3.4 | 0.0014 |
| <i>ADAMTS12</i> | 5 | 8111387 | 163.0 \pm 84.2 | 108.9 \pm 40.9 | -54.1 | 0.0002 | 0.013 | cg26077446 | Body | Open sea | 68.4 \pm 3.5 | 72.0 \pm 3.3 | 3.6 | 0.0011 |
| <i>ADAMTS5</i> | 21 | 8069689 | 42.9 \pm 8.1 | 51.6 \pm 12.0 | 8.7 | 0.0012 | 0.027 | cg07771160 | Body | N Shore | 60.5 \pm 4.6 | 63.8 \pm 5.2 | 3.3 | 0.0124 |
| <i>ADAR</i> | 1 | 7920531 | 585.3 \pm 80.8 | 544.2 \pm 78.2 | -41.2 | 0.0012 | 0.027 | cg27530370 | 5'UTR | Open sea | 44.9 \pm 6.6 | 48.2 \pm 4.5 | 3.3 | 0.0100 |
| <i>ADCY2</i> | 5 | 8104394 | 75.6 \pm 10.1 | 116.1 \pm 31.0 | 40.5 | 0.0002 | 0.013 | cg05921947 | Body | Open sea | 64.9 \pm 2.8 | 69.3 \pm 3.6 | 4.4 | 0.0019 |
| <i>ADD3</i> | 10 | 7930380 | 417.9 \pm 57.4 | 337.1 \pm 51.4 | -80.8 | 0.0002 | 0.013 | cg14742187 | 5'UTR | Open sea | 71.8 \pm 4.6 | 74.9 \pm 4.7 | 3.1 | 0.0047 |
| <i>ADD3</i> | 10 | 7930380 | 417.9 \pm 57.4 | 337.1 \pm 51.4 | -80.8 | 0.0002 | 0.013 | cg22666103 | 5'UTR | Open sea | 54.0 \pm 7.4 | 57.6 \pm 7.5 | 3.7 | 0.0168 |
| <i>ALB</i> | 4 | 8095628 | 2,647.2 \pm 1,479.3 | 1,986.9 \pm 1,467.5 | -660.3 | 0.0007 | 0.020 | cg24656976 | Body | Open sea | 76.9 \pm 4.4 | 80.4 \pm 2.6 | 3.5 | 0.0076 |
| <i>ALDH1A3</i> | 15 | 7986446 | 624.8 \pm 244.8 | 396.3 \pm 203.3 | -228.5 | 0.0002 | 0.013 | cg26333136 | TSS1500 | Island | 13.8 \pm 6.6 | 10.2 \pm 2.9 | -3.6 | 0.0052 |
| <i>ANK3</i> | 10 | 7933772 | 69.4 \pm 14.4 | 56.3 \pm 11.2 | -13.1 | 0.0005 | 0.017 | cg24332570 | Body | Open sea | 72.3 \pm 4.6 | 75.6 \pm 3.7 | 3.3 | 0.0167 |
| <i>ANK3</i> | 10 | 7933772 | 69.4 \pm 14.4 | 56.3 \pm 11.2 | -13.1 | 0.0005 | 0.017 | cg02573152 | Body | Open sea | 66.6 \pm 7.3 | 70.4 \pm 5.2 | 3.8 | 0.0082 |
| <i>ANTXR1</i> | 2 | 8042439 | 214.1 \pm 99.9 | 167.6 \pm 67.5 | -46.5 | 0.0005 | 0.017 | cg16190888 | Body | Open sea | 55.7 \pm 6.6 | 59.2 \pm 6.5 | 3.5 | 0.0221 |
| <i>ANTXR2</i> | 4 | 8101260 | 140.3 \pm 32.6 | 112.5 \pm 34.5 | -27.8 | 0.0024 | 0.041 | cg03164800 | Body | Open sea | 69.9 \pm 4.1 | 73.1 \pm 4.8 | 3.2 | 0.0020 |
| <i>ANTXR2</i> | 4 | 8101260 | 140.3 \pm 32.6 | 112.5 \pm 34.5 | -27.8 | 0.0024 | 0.041 | cg01174264 | Body | N Shore | 44.7 \pm 5.1 | 49.2 \pm 4.6 | 4.5 | 0.0019 |
| <i>AP3SI</i> | 5 | 8107421 | 237.2 \pm 28.6 | 209.2 \pm 26.9 | -28.0 | 0.0024 | 0.041 | cg16627211 | Body | Open sea | 71.7 \pm 5.0 | 75.1 \pm 3.3 | 3.4 | 0.0080 |
| <i>AP3SI</i> | 5 | 8107421 | 237.2 \pm 28.6 | 209.2 \pm 26.9 | -28.0 | 0.0024 | 0.041 | cg24770230 | Body | Open sea | 77.1 \pm 4.8 | 81.9 \pm 4.3 | 4.7 | 0.0050 |

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|-----------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|--------------------|----------|------------|-------------|-----|--------|
| <i>ARG2</i> | 14 | 7975268 | 331.4 ± 163.6 | 436.4 ± 198.9 | 105.1 | 0.0017 | 0.033 | cg11752250 | Body | S Shelf | 64.0 ± 6.0 | 68.0 ± 7.0 | 4.0 | 0.0029 |
| <i>ARHGAP26</i> | 5 | 8108873 | 164.9 ± 32.5 | 135.4 ± 32.8 | -29.5 | 0.0002 | 0.013 | cg05153380 | Body | Open sea | 58.3 ± 5.5 | 61.6 ± 5.0 | 3.3 | 0.0094 |
| <i>ARHGAP26</i> | 5 | 8108873 | 164.9 ± 32.5 | 135.4 ± 32.8 | -29.5 | 0.0002 | 0.013 | cg15368044 | Body | Open sea | 71.2 ± 4.6 | 75.2 ± 3.6 | 4.0 | 0.0087 |
| <i>ARHGAP26</i> | 5 | 8108873 | 164.9 ± 32.5 | 135.4 ± 32.8 | -29.5 | 0.0002 | 0.013 | cg00997251 | Body | Open sea | 62.9 ± 5.2 | 67.3 ± 6.5 | 4.4 | 0.0038 |
| <i>ARHGAP26</i> | 5 | 8108873 | 164.9 ± 32.5 | 135.4 ± 32.8 | -29.5 | 0.0002 | 0.013 | cg17262755 | Body | Open sea | 53.7 ± 4.9 | 59.5 ± 3.7 | 5.9 | 0.0002 |
| <i>ARHGEF18</i> | 19 | 8025142 | 206.0 ± 39.5 | 192.7 ± 40.3 | -13.3 | 0.0005 | 0.017 | cg08036804 | 5'UTR; TSS1500 | N Shore | 67.8 ± 7.4 | 70.9 ± 7.5 | 3.1 | 0.0196 |
| <i>ARHGEF3</i> | 3 | 8088247 | 394.8 ± 100.2 | 328.5 ± 99.9 | -66.3 | 0.0024 | 0.041 | cg04389058 | Body | Open sea | 52.3 ± 9.1 | 55.8 ± 10.4 | 3.5 | 0.0076 |
| <i>ARID5B</i> | 10 | 7927732 | 408.8 ± 52.4 | 495.3 ± 86.6 | 86.4 | 0.0024 | 0.041 | cg22782105 | Body | Open sea | 78.0 ± 2.9 | 81.2 ± 2.4 | 3.3 | 0.0062 |
| <i>ARID5B</i> | 10 | 7927732 | 408.8 ± 52.4 | 495.3 ± 86.6 | 86.4 | 0.0024 | 0.041 | cg27027230 | Body | Open sea | 52.7 ± 6.4 | 56.2 ± 6.1 | 3.5 | 0.0349 |
| <i>ARID5B</i> | 10 | 7927732 | 408.8 ± 52.4 | 495.3 ± 86.6 | 86.4 | 0.0024 | 0.041 | cg11283402 | Body | Open sea | 78.0 ± 4.4 | 82.0 ± 2.6 | 4.0 | 0.0023 |
| <i>ARID5B</i> | 10 | 7927732 | 408.8 ± 52.4 | 495.3 ± 86.6 | 86.4 | 0.0024 | 0.041 | cg02863179 | Body | Open sea | 50.5 ± 7.5 | 55.8 ± 6.1 | 5.4 | 0.0001 |
| <i>ARL6IP5</i> | 3 | 8080926 | 3,148.3 ± 229.4 | 2,819.0 ± 313.9 | -329.3 | 0.0012 | 0.027 | cg11421073 | 3'UTR | Open sea | 67.2 ± 3.9 | 71.0 ± 3.8 | 3.8 | 0.0036 |
| <i>ARNT</i> | 1 | 7919825 | 439.5 ± 37.7 | 404.0 ± 42.8 | -35.5 | 0.0005 | 0.017 | cg12912293 | TSS1500 | S Shore | 70.4 ± 4.8 | 73.6 ± 3.1 | 3.2 | 0.0255 |
| <i>ASB9</i> | X | 8171392 | 174.5 ± 99.1 | 96.7 ± 52.8 | -77.7 | 0.0002 | 0.013 | cg13824755 | Body | Open sea | 79.9 ± 5.2 | 83.1 ± 3.5 | 3.2 | 0.0025 |
| <i>ASB9</i> | X | 8171392 | 174.5 ± 99.1 | 96.7 ± 52.8 | -77.7 | 0.0002 | 0.013 | cg01540916 | TSS200; TSS1500 | Open sea | 39.8 ± 6.6 | 43.0 ± 9.4 | 3.2 | 0.0461 |
| <i>ATP11A</i> | 13 | 7970162 | 184.9 ± 37.8 | 153.7 ± 35.7 | -31.2 | 0.0017 | 0.033 | cg02738374 | Body | Island | 80.0 ± 3.7 | 83.4 ± 2.7 | 3.4 | 0.0007 |
| <i>ATP11A</i> | 13 | 7970162 | 184.9 ± 37.8 | 153.7 ± 35.7 | -31.2 | 0.0017 | 0.033 | cg19293163 | Body | N Shore | 63.9 ± 7.4 | 68.4 ± 5.6 | 4.5 | 0.0049 |
| <i>ATP11C</i> | X | 8175492 | 95.6 ± 24.0 | 80.0 ± 18.0 | -15.6 | 0.0005 | 0.017 | cg18433694 | TSS200 | Open sea | 73.1 ± 5.9 | 76.1 ± 7.8 | 3.0 | 0.0059 |
| <i>ATP7A</i> | X | 8168472 | 198.0 ± 23.2 | 172.2 ± 33.9 | -25.8 | 0.0024 | 0.041 | cg26358122 | 5'UTR | Open sea | 68.9 ± 7.6 | 72.3 ± 4.7 | 3.4 | 0.0130 |
| <i>ATP7A</i> | X | 8168472 | 198.0 ± 23.2 | 172.2 ± 33.9 | -25.8 | 0.0024 | 0.041 | cg22396161 | 3'UTR | Open sea | 66.4 ± 9.6 | 70.0 ± 9.5 | 3.6 | 0.0164 |
| <i>B2M</i> | 15 | 7983360 | 5,372.3 ± 635.7 | 4,947.1 ± 759.7 | -425.2 | 0.0017 | 0.033 | cg18555073 | TSS1500 | N Shore | 36.2 ± 5.3 | 39.4 ± 4.9 | 3.2 | 0.0331 |
| <i>BCO2</i> | 11 | 7943867 | 80.6 ± 14.5 | 68.9 ± 17.6 | -11.7 | 0.0034 | 0.049 | cg24002907 | 3'UTR | Open sea | 28.2 ± 4.0 | 31.6 ± 4.7 | 3.3 | 0.0255 |
| <i>BGN</i> | X | 8170648 | 472.3 ± 232.4 | 374.8 ± 151.2 | -97.5 | 0.0017 | 0.033 | cg16847374 | Body | Open sea | 66.2 ± 5.9 | 69.5 ± 3.8 | 3.4 | 0.0079 |
| <i>BICCI</i> | 10 | 7927681 | 464.7 ± 189.0 | 351.0 ± 149.7 | -113.7 | 0.0002 | 0.013 | cg02387380 | Body | Open sea | 78.0 ± 4.7 | 81.9 ± 4.7 | 3.9 | 0.0054 |
| <i>BMPRIA</i> | 10 | 7928855 | 675.8 ± 67.7 | 618.1 ± 101.2 | -57.7 | 0.0024 | 0.041 | cg08626436 | 5'UTR | Open sea | 22.5 ± 5.2 | 25.8 ± 5.2 | 3.3 | 0.0042 |

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|-----------------|----|---------|-----------------|---------------|--------|--------|-------|------------|-------------------|----------|-------------|-------------|-----|--------|
| <i>C11orf54</i> | 11 | 7943162 | 770.8 ± 161.3 | 677.3 ± 130.1 | -93.5 | 0.0002 | 0.013 | cg13528726 | 3'UTR | Open sea | 84.3 ± 2.6 | 87.4 ± 1.7 | 3.1 | 0.0012 |
| <i>C20orf26</i> | 20 | 8061272 | 36.7 ± 9.4 | 45.4 ± 16.6 | 8.6 | 0.0034 | 0.049 | cg11382945 | TSS200; 5'UTR | S Shelf | 50.5 ± 4.1 | 54.5 ± 4.3 | 4.0 | 0.0247 |
| <i>C22orf42</i> | 22 | 8075555 | 189.5 ± 84.5 | 234.9 ± 104.0 | 45.4 | 0.0024 | 0.041 | cg01558877 | TSS200 | Open sea | 42.0 ± 5.8 | 47.4 ± 7.0 | 5.4 | 0.0003 |
| <i>C3AR1</i> | 12 | 7960874 | 53.0 ± 16.8 | 42.5 ± 12.7 | -10.5 | 0.0034 | 0.049 | cg25757697 | TSS1500 | Open sea | 77.4 ± 3.2 | 80.6 ± 2.9 | 3.1 | 0.0081 |
| <i>C4orf19</i> | 4 | 8094550 | 180.0 ± 41.5 | 147.7 ± 31.9 | -32.3 | 0.0005 | 0.017 | cg12209861 | 5'UTR | S Shelf | 60.2 ± 6.1 | 64.4 ± 5.5 | 4.2 | 0.0019 |
| <i>C6orf27</i> | 6 | 8125072 | 116.3 ± 24.8 | 145.1 ± 33.3 | 28.8 | 0.0005 | 0.017 | cg00686197 | Body | Open sea | 67.0 ± 5.4 | 70.2 ± 4.0 | 3.1 | 0.0086 |
| <i>C9orf5</i> | 9 | 8163086 | 965.6 ± 74.8 | 840.0 ± 62.4 | -125.6 | 0.0002 | 0.013 | cg11727569 | TSS1500 | S Shore | 53.3 ± 5.0 | 57.6 ± 4.2 | 4.4 | 0.0020 |
| <i>CARS</i> | 11 | 7945803 | 321.5 ± 39.5 | 371.7 ± 47.0 | 50.3 | 0.0012 | 0.027 | cg14935025 | Body; 5'UTR | Open sea | 55.3 ± 11.0 | 58.6 ± 11.4 | 3.3 | 0.0163 |
| <i>CASP1</i> | 11 | 7951397 | 62.0 ± 22.2 | 44.0 ± 13.9 | -18.1 | 0.0024 | 0.041 | cg05671385 | Body | Open sea | 59.0 ± 5.7 | 63.0 ± 6.5 | 4.0 | 0.0181 |
| <i>CASP5</i> | 11 | 7951385 | 29.7 ± 13.3 | 20.2 ± 8.0 | -9.5 | 0.0012 | 0.027 | cg24432977 | Body; 3'UTR | Open sea | 38.6 ± 10.4 | 42.8 ± 10.7 | 4.2 | 0.0191 |
| <i>CBR4</i> | 4 | 8103622 | 483.1 ± 70.9 | 391.5 ± 98.7 | -91.6 | 0.0002 | 0.013 | cg26174928 | Body | N Shore | 76.6 ± 5.2 | 79.8 ± 4.9 | 3.1 | 0.0263 |
| <i>CCDC149</i> | 4 | 8099670 | 118.3 ± 10.4 | 134.5 ± 9.0 | 16.2 | 0.0005 | 0.017 | cg06102690 | TSS200 | Open sea | 18.6 ± 4.9 | 22.2 ± 4.9 | 3.6 | 0.0025 |
| <i>CCNA2</i> | 4 | 8102643 | 89.1 ± 21.8 | 61.6 ± 11.4 | -27.5 | 0.0002 | 0.013 | cg23574427 | TSS1500 | S Shore | 68.9 ± 4.3 | 72.2 ± 5.0 | 3.2 | 0.0096 |
| <i>CD200R1</i> | 3 | 8089568 | 9.0 ± 1.1 | 10.1 ± 0.8 | 1.1 | 0.0034 | 0.049 | cg00246486 | 3'UTR | Open sea | 63.6 ± 5.2 | 68.7 ± 3.4 | 5.1 | 0.0011 |
| <i>CD2AP</i> | 6 | 8120102 | 1,048.2 ± 126.6 | 944.1 ± 134.8 | -104.1 | 0.0007 | 0.020 | cg20172563 | Body | Open sea | 42.9 ± 5.4 | 46.0 ± 5.3 | 3.1 | 0.0321 |
| <i>CD2AP</i> | 6 | 8120102 | 1,048.2 ± 126.6 | 944.1 ± 134.8 | -104.1 | 0.0007 | 0.020 | cg19989043 | Body | Open sea | 61.3 ± 5.7 | 64.5 ± 4.6 | 3.1 | 0.0077 |
| <i>CD2AP</i> | 6 | 8120102 | 1,048.2 ± 126.6 | 944.1 ± 134.8 | -104.1 | 0.0007 | 0.020 | cg15629447 | 3'UTR | Open sea | 75.9 ± 5.5 | 80.1 ± 4.5 | 4.1 | 0.0039 |
| <i>CDK2API</i> | 12 | 7967412 | 1,125.2 ± 132.0 | 953.3 ± 103.5 | -171.9 | 0.0005 | 0.017 | cg22465824 | 3'UTR | Open sea | 76.4 ± 4.0 | 79.7 ± 2.1 | 3.3 | 0.0106 |
| <i>CDK5</i> | 7 | 8143850 | 255.7 ± 35.6 | 232.3 ± 36.9 | -23.4 | 0.0012 | 0.027 | cg11368578 | 1stExon; 5'UTR | Island | 14.6 ± 6.5 | 18.9 ± 7.4 | 4.3 | 0.0129 |
| <i>CHEK1</i> | 11 | 7945014 | 73.8 ± 20.0 | 52.0 ± 16.7 | -21.8 | 0.0002 | 0.013 | cg00554702 | 5'UTR | S Shore | 11.6 ± 3.3 | 14.6 ± 5.1 | 3.0 | 0.0007 |
| <i>CLIC5</i> | 6 | 8126729 | 34.8 ± 10.1 | 24.6 ± 4.3 | -10.2 | 0.0007 | 0.020 | cg23716866 | TSS1500 | Open sea | 62.5 ± 3.7 | 66.5 ± 5.1 | 4.0 | 0.0074 |
| <i>CLMN</i> | 14 | 7981142 | 304.8 ± 101.3 | 243.9 ± 91.5 | -60.9 | 0.0002 | 0.013 | cg05239310 | 3'UTR | Open sea | 47.9 ± 6.6 | 50.9 ± 5.2 | 3.0 | 0.0248 |
| <i>CLRN3</i> | 10 | 7937016 | 53.6 ± 32.7 | 24.8 ± 8.7 | -28.8 | 0.0002 | 0.013 | cg23817637 | TSS1500 | Open sea | 72.9 ± 6.7 | 76.7 ± 4.3 | 3.9 | 0.0118 |
| <i>CLYBL</i> | 13 | 7969815 | 112.1 ± 15.7 | 101.3 ± 13.6 | -10.8 | 0.0007 | 0.020 | cg17826893 | Body | Open sea | 67.5 ± 6.7 | 70.6 ± 6.7 | 3.1 | 0.0256 |
| <i>CLYBL</i> | 13 | 7969815 | 112.1 ± 15.7 | 101.3 ± 13.6 | -10.8 | 0.0007 | 0.020 | cg02509730 | Body | Island | 68.5 ± 5.7 | 72.3 ± 7.4 | 3.8 | 0.0106 |

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|----------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|-----------------|----------|-------------|-------------|------|--------|
| <i>CNGA3</i> | 2 | 8043782 | 114.5 ± 44.8 | 190.1 ± 79.9 | 75.6 | 0.0002 | 0.013 | cg05564412 | TSS1500 | N Shore | 67.2 ± 7.3 | 70.6 ± 8.1 | 3.4 | 0.0114 |
| <i>COL15A1</i> | 9 | 8156783 | 302.3 ± 109.1 | 249.3 ± 87.1 | -53.0 | 0.0034 | 0.049 | cg14259208 | Body | Open sea | 70.4 ± 3.1 | 74.1 ± 5.0 | 3.8 | 0.0070 |
| <i>COL4A1</i> | 13 | 7972750 | 467.7 ± 171.7 | 366.4 ± 106.8 | -101.3 | 0.0024 | 0.041 | cg02730492 | Body | Open sea | 69.4 ± 4.2 | 72.8 ± 4.3 | 3.3 | 0.0139 |
| <i>COL4A1</i> | 13 | 7972750 | 467.7 ± 171.7 | 366.4 ± 106.8 | -101.3 | 0.0024 | 0.041 | cg19234894 | Body | Open sea | 67.1 ± 6.3 | 71.2 ± 5.6 | 4.2 | 0.0275 |
| <i>COPG</i> | 3 | 8082478 | 699.6 ± 104.0 | 781.6 ± 110.1 | 82.0 | 0.0024 | 0.041 | cg12216435 | Body | N Shore | 62.6 ± 4.4 | 65.7 ± 5.1 | 3.1 | 0.0090 |
| <i>CRIM1</i> | 2 | 8041447 | 552.1 ± 129.2 | 498.8 ± 124.7 | -53.3 | 0.0007 | 0.020 | cg11913694 | Body | Open sea | 79.0 ± 4.2 | 82.6 ± 3.8 | 3.7 | 0.0072 |
| <i>CRMP1</i> | 4 | 8099172 | 248.5 ± 80.3 | 272.9 ± 67.4 | 24.4 | 0.0034 | 0.049 | cg20529645 | Body | N Shelf | 68.5 ± 4.7 | 71.7 ± 3.5 | 3.2 | 0.0363 |
| <i>CRMP1</i> | 4 | 8099172 | 248.5 ± 80.3 | 272.9 ± 67.4 | 24.4 | 0.0034 | 0.049 | cg05737153 | Body | Open sea | 69.7 ± 6.3 | 73.4 ± 7.0 | 3.6 | 0.0136 |
| <i>CRMP1</i> | 4 | 8099172 | 248.5 ± 80.3 | 272.9 ± 67.4 | 24.4 | 0.0034 | 0.049 | cg23830540 | Body | Open sea | 38.9 ± 13.0 | 42.9 ± 13.2 | 4.0 | 0.0150 |
| <i>CSTF1</i> | 20 | 8063484 | 188.8 ± 9.9 | 175.5 ± 11.4 | -13.4 | 0.0012 | 0.027 | cg15747531 | Body | S Shelf | 76.4 ± 6.6 | 79.6 ± 5.7 | 3.1 | 0.0101 |
| <i>CTSC</i> | 11 | 7950906 | 312.2 ± 81.0 | 225.5 ± 52.2 | -86.7 | 0.0007 | 0.020 | cg03596479 | Body | Open sea | 66.7 ± 2.9 | 70.5 ± 4.5 | 3.8 | 0.0014 |
| <i>CXXC5</i> | 5 | 8108447 | 739.8 ± 60.3 | 645.7 ± 82.9 | -94.1 | 0.0005 | 0.017 | cg17306279 | 5'UTR | Island | 41.4 ± 6.1 | 38.3 ± 7.0 | -3.0 | 0.0409 |
| <i>CXXC5</i> | 5 | 8108447 | 739.8 ± 60.3 | 645.7 ± 82.9 | -94.1 | 0.0005 | 0.017 | cg06905511 | 3'UTR | S Shore | 81.8 ± 2.3 | 85.5 ± 2.9 | 3.7 | 0.0003 |
| <i>CYFIP1</i> | 15 | 7981824 | 478.1 ± 60.7 | 436.7 ± 59.2 | -41.3 | 0.0005 | 0.017 | cg02594498 | 5'UTR | Island | 12.2 ± 5.6 | 15.6 ± 6.4 | 3.4 | 0.0233 |
| <i>DCBLD2</i> | 3 | 8089082 | 554.9 ± 156.9 | 428.9 ± 107.9 | -126.0 | 0.0005 | 0.017 | cg16331862 | 3'UTR | Open sea | 69.2 ± 8.5 | 73.8 ± 7.3 | 4.6 | 0.0038 |
| <i>DCDC2</i> | 6 | 8124196 | 483.2 ± 135.9 | 391.0 ± 132.8 | -92.2 | 0.0024 | 0.041 | cg04945158 | TSS1500 | N Shore | 30.4 ± 3.5 | 34.8 ± 4.8 | 4.5 | 0.0031 |
| <i>DDAH1</i> | 1 | 7917347 | 710.1 ± 122.2 | 586.1 ± 79.9 | -123.9 | 0.0002 | 0.013 | cg01550348 | Body | Open sea | 60.8 ± 11.4 | 64.0 ± 12.5 | 3.2 | 0.0437 |
| <i>DDX5</i> | 17 | 8017634 | 2,163.1 ± 291.2 | 2,023.7 ± 233.2 | -139.3 | 0.0017 | 0.033 | cg23225508 | Body | N Shore | 38.9 ± 5.6 | 42.6 ± 4.9 | 3.7 | 0.0028 |
| <i>DDX5</i> | 17 | 8017634 | 2,163.1 ± 291.2 | 2,023.7 ± 233.2 | -139.3 | 0.0017 | 0.033 | cg14548777 | 3'UTR | S Shore | 55.1 ± 6.5 | 58.7 ± 6.0 | 3.7 | 0.0115 |
| <i>DDX5</i> | 17 | 8017634 | 2,163.1 ± 291.2 | 2,023.7 ± 233.2 | -139.3 | 0.0017 | 0.033 | cg10244222 | Body | S Shelf | 70.5 ± 2.4 | 74.3 ± 4.1 | 3.8 | 0.0021 |
| <i>DHX15</i> | 4 | 8099649 | 1,318.2 ± 137.1 | 1,222.2 ± 117.0 | -96.0 | 0.0024 | 0.041 | cg21302120 | Body | N Shore | 14.9 ± 8.2 | 18.6 ± 8.0 | 3.7 | 0.0288 |
| <i>DNAJA4</i> | 15 | 7985147 | 318.3 ± 94.8 | 417.0 ± 127.4 | 98.7 | 0.0005 | 0.017 | cg21642988 | TSS200; Body | S Shore | 49.0 ± 9.7 | 52.4 ± 10.5 | 3.4 | 0.0322 |
| <i>DNAJB6</i> | 7 | 8137627 | 373.7 ± 32.1 | 328.2 ± 40.6 | -45.5 | 0.0017 | 0.033 | cg05090392 | 3'UTR | S Shore | 79.2 ± 3.5 | 83.4 ± 3.4 | 4.3 | 0.0002 |
| <i>DNM3</i> | 1 | 7907370 | 51.6 ± 11.7 | 62.1 ± 17.4 | 10.6 | 0.0017 | 0.033 | cg21450888 | Body | Open sea | 70.8 ± 5.7 | 75.0 ± 8.4 | 4.2 | 0.0415 |
| <i>DNM3</i> | 1 | 7907370 | 51.6 ± 11.7 | 62.1 ± 17.4 | 10.6 | 0.0017 | 0.033 | cg10769535 | Body | Open sea | 66.4 ± 4.4 | 71.5 ± 3.7 | 5.1 | 0.0013 |

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|-----------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|----------------------------|----------|-------------|-------------|------|--------|
| <i>DSE</i> | 6 | 8121588 | 237.1 ± 66.9 | 194.5 ± 49.5 | -42.6 | 0.0005 | 0.017 | cg24407607 | Body | Open sea | 49.9 ± 23.0 | 52.9 ± 23.1 | 3.0 | 0.0106 |
| <i>DSE</i> | 6 | 8121588 | 237.1 ± 66.9 | 194.5 ± 49.5 | -42.6 | 0.0005 | 0.017 | cg19341652 | TSS1500 | N Shore | 17.8 ± 3.1 | 20.9 ± 3.0 | 3.1 | 0.0021 |
| <i>DUSP5</i> | 10 | 7930413 | 357.0 ± 61.4 | 471.4 ± 66.0 | 114.4 | 0.0005 | 0.017 | cg18756771 | Body | S Shelf | 52.5 ± 6.3 | 55.6 ± 4.7 | 3.1 | 0.0145 |
| <i>EFR3A</i> | 8 | 8148333 | 1,179.9 ± 218.9 | 1,071.9 ± 203.8 | -108.0 | 0.0005 | 0.017 | cg24184792 | Body | S Shelf | 68.7 ± 7.9 | 71.7 ± 6.5 | 3.1 | 0.0140 |
| <i>ENAH</i> | 1 | 7924619 | 345.3 ± 75.1 | 278.0 ± 58.4 | -67.3 | 0.0002 | 0.013 | cg21410954 | Body | Open sea | 51.0 ± 13.7 | 54.9 ± 12.5 | 3.8 | 0.0124 |
| <i>ENG</i> | 9 | 8164269 | 268.5 ± 66.3 | 211.6 ± 47.4 | -56.8 | 0.0012 | 0.027 | cg13458609 | Body | Open sea | 43.8 ± 6.6 | 40.7 ± 8.7 | -3.2 | 0.0298 |
| <i>ENOX1</i> | 13 | 7971311 | 45.9 ± 4.5 | 52.9 ± 7.2 | 7.0 | 0.0034 | 0.049 | cg06587495 | 5'UTR | Open sea | 79.7 ± 3.9 | 82.8 ± 3.2 | 3.1 | 0.0195 |
| <i>ENOX1</i> | 13 | 7971311 | 45.9 ± 4.5 | 52.9 ± 7.2 | 7.0 | 0.0034 | 0.049 | cg09603398 | 5'UTR | Open sea | 74.8 ± 6.0 | 77.9 ± 3.3 | 3.1 | 0.0206 |
| <i>ENOX1</i> | 13 | 7971311 | 45.9 ± 4.5 | 52.9 ± 7.2 | 7.0 | 0.0034 | 0.049 | cg25544384 | 5'UTR | Open sea | 76.4 ± 4.0 | 79.6 ± 4.1 | 3.2 | 0.0149 |
| <i>ENOX1</i> | 13 | 7971311 | 45.9 ± 4.5 | 52.9 ± 7.2 | 7.0 | 0.0034 | 0.049 | cg04417236 | Body | Open sea | 37.1 ± 3.9 | 42.8 ± 7.4 | 5.6 | 0.0024 |
| <i>EPB41L1</i> | 20 | 8062251 | 122.0 ± 15.5 | 110.9 ± 15.5 | -11.1 | 0.0012 | 0.027 | cg21211882 | Body | Open sea | 66.5 ± 4.7 | 69.7 ± 3.9 | 3.2 | 0.0074 |
| <i>EPB41L4A</i> | 5 | 8113512 | 120.2 ± 25.7 | 95.5 ± 26.5 | -24.7 | 0.0005 | 0.017 | cg24942990 | 3'UTR | S Shelf | 76.6 ± 4.6 | 79.7 ± 3.6 | 3.1 | 0.0055 |
| <i>EPB41L4A</i> | 5 | 8113512 | 120.2 ± 25.7 | 95.5 ± 26.5 | -24.7 | 0.0005 | 0.017 | cg14798584 | Body | Open sea | 59.9 ± 3.2 | 63.7 ± 4.4 | 3.8 | 0.0058 |
| <i>ERCC6</i> | 10 | 7933509 | 191.3 ± 23.6 | 174.4 ± 31.8 | -16.9 | 0.0007 | 0.020 | cg25656283 | Body | Open sea | 64.6 ± 4.9 | 68.5 ± 5.9 | 3.9 | 0.0045 |
| <i>EXOC4</i> | 7 | 8136293 | 623.4 ± 56.3 | 579.0 ± 64.4 | -44.4 | 0.0005 | 0.017 | cg10939418 | Body | Open sea | 70.4 ± 7.2 | 73.9 ± 3.6 | 3.5 | 0.0233 |
| <i>F2R</i> | 5 | 8106393 | 194.1 ± 101.6 | 138.6 ± 51.2 | -55.5 | 0.0007 | 0.020 | cg09059904 | Body | S Shore | 30.9 ± 3.9 | 34.4 ± 3.8 | 3.5 | 0.0123 |
| <i>FAM13C</i> | 10 | 7933733 | 67.7 ± 31.5 | 78.4 ± 34.0 | 10.7 | 0.0012 | 0.027 | cg04557025 | Body; 5'UTR | Open sea | 78.5 ± 5.2 | 81.6 ± 4.6 | 3.2 | 0.0187 |
| <i>FARP1</i> | 13 | 7969736 | 263.1 ± 50.1 | 232.7 ± 40.9 | -30.4 | 0.0005 | 0.017 | cg20653375 | 3'UTR | Open sea | 48.3 ± 5.8 | 51.8 ± 5.2 | 3.5 | 0.0185 |
| <i>FARP1</i> | 13 | 7969736 | 263.1 ± 50.1 | 232.7 ± 40.9 | -30.4 | 0.0005 | 0.017 | cg16689193 | Body | Open sea | 76.1 ± 3.0 | 80.0 ± 4.7 | 3.9 | 0.0019 |
| <i>FBXL4</i> | 6 | 8128356 | 279.8 ± 39.4 | 249.3 ± 29.1 | -30.5 | 0.0017 | 0.033 | cg19140262 | 5'UTR | Open sea | 49.1 ± 13.2 | 52.5 ± 12.6 | 3.4 | 0.0307 |
| <i>FBXO34</i> | 14 | 7974473 | 420.0 ± 45.1 | 360.4 ± 39.0 | -59.6 | 0.0012 | 0.027 | cg04971161 | 5'UTR | Open sea | 69.2 ± 5.1 | 72.4 ± 3.5 | 3.1 | 0.0304 |
| <i>FGF13</i> | X | 8175444 | 110.0 ± 24.7 | 138.0 ± 33.3 | 28.1 | 0.0002 | 0.013 | cg03537374 | 5'UTR; Body; TSS1500 | Open sea | 59.0 ± 7.8 | 62.2 ± 5.7 | 3.2 | 0.0275 |
| <i>FGF13</i> | X | 8175444 | 110.0 ± 24.7 | 138.0 ± 33.3 | 28.1 | 0.0002 | 0.013 | cg02588867 | 5'UTR; Body; TSS1500 | Open sea | 76.0 ± 5.0 | 79.3 ± 4.0 | 3.4 | 0.0101 |
| <i>FGF19</i> | 11 | 7950023 | 202.8 ± 119.0 | 117.5 ± 43.1 | -85.3 | 0.0012 | 0.027 | cg02513449 | TSS1500 | S Shore | 39.7 ± 5.8 | 43.3 ± 5.9 | 3.6 | 0.0046 |

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|------------------|------------|---------|-----------------|-----------------|--------|--------|-------|------------|----------------------------|----------|-------------|-------------|-----|---------|
| <i>FHL2</i> | 2 | 8054377 | 152.2 ± 36.7 | 129.6 ± 27.1 | -22.6 | 0.0007 | 0.020 | cg01007821 | 5'UTR | S Shelf | 75.4 ± 6.4 | 78.8 ± 6.1 | 3.4 | 0.0281 |
| <i>FN1</i> | 2 | 8058765 | 1,679.4 ± 750.8 | 1,213.2 ± 636.7 | -466.2 | 0.0012 | 0.027 | cg09335314 | Body | Open sea | 79.1 ± 5.1 | 82.1 ± 2.7 | 3.0 | 0.0190 |
| <i>FN1</i> | 2 | 8058765 | 1,679.4 ± 750.8 | 1,213.2 ± 636.7 | -466.2 | 0.0012 | 0.027 | cg25099021 | Body | Open sea | 78.8 ± 7.3 | 82.9 ± 3.2 | 4.1 | 0.0397 |
| <i>FRAS1</i> | 4 | 8095907 | 58.9 ± 13.8 | 48.0 ± 12.8 | -10.9 | 0.0002 | 0.013 | cg14091154 | Body | Open sea | 72.2 ± 4.8 | 76.0 ± 4.1 | 3.9 | 0.0127 |
| <i>GAB2</i> | 11 | 7950671 | 96.8 ± 11.9 | 110.3 ± 11.9 | 13.4 | 0.0034 | 0.049 | cg05447955 | Body | N Shelf | 78.6 ± 3.9 | 84.1 ± 2.9 | 5.5 | 0.00003 |
| <i>GALNT5</i> | 2 | 8045835 | 59.0 ± 18.4 | 38.8 ± 8.6 | -20.2 | 0.0012 | 0.027 | cg10982635 | Body | Open sea | 47.4 ± 13.0 | 51.0 ± 12.6 | 3.6 | 0.0174 |
| <i>GBP2</i> | 1 | 7917532 | 143.4 ± 63.3 | 105.1 ± 53.0 | -38.3 | 0.0017 | 0.033 | cg13187849 | Body | Open sea | 75.3 ± 3.4 | 78.4 ± 2.8 | 3.1 | 0.0136 |
| <i>GCH1</i> | 14 | 7979269 | 722.3 ± 248.2 | 1,050.1 ± 404.9 | 327.7 | 0.0005 | 0.017 | cg16387581 | Body | Open sea | 74.3 ± 4.8 | 77.3 ± 4.7 | 3.0 | 0.0211 |
| <i>GCH1</i> | 14 | 7979269 | 722.3 ± 248.2 | 1,050.1 ± 404.9 | 327.7 | 0.0005 | 0.017 | cg01899130 | Body | Open sea | 29.1 ± 11.0 | 32.4 ± 11.2 | 3.4 | 0.0440 |
| <i>GCKR</i> | 2 | 8040960 | 80.8 ± 32.2 | 104.2 ± 65.0 | 23.4 | 0.0012 | 0.027 | cg20229788 | TSS1500 | S Shore | 24.3 ± 6.3 | 27.4 ± 5.9 | 3.1 | 0.0129 |
| <i>GFRA1</i> | 10 | 7936494 | 57.9 ± 9.8 | 72.7 ± 14.5 | 14.8 | 0.0005 | 0.017 | cg17718728 | Body | Open sea | 57.7 ± 12.0 | 60.7 ± 11.0 | 3.0 | 0.0422 |
| <i>GIT2</i> | 12 | 7966268 | 298.0 ± 19.8 | 269.8 ± 28.6 | -28.2 | 0.0002 | 0.013 | cg17337670 | Body | Open sea | 64.2 ± 6.7 | 67.9 ± 6.6 | 3.7 | 0.0024 |
| <i>GLIPR1</i> | 12 | 7957260 | 213.6 ± 104.2 | 153.3 ± 54.1 | -60.3 | 0.0012 | 0.027 | cg01554451 | TSS1500 | Open sea | 67.4 ± 5.0 | 71.5 ± 4.0 | 4.1 | 0.0025 |
| <i>GLIS3</i> | 9 | 8159900 | 441.4 ± 66.2 | 394.9 ± 47.8 | -46.5 | 0.0012 | 0.027 | cg14641122 | Body | Open sea | 33.4 ± 8.2 | 36.7 ± 9.3 | 3.2 | 0.0103 |
| <i>GLIS3</i> | 9 | 8159900 | 441.4 ± 66.2 | 394.9 ± 47.8 | -46.5 | 0.0012 | 0.027 | cg14269813 | Body | Open sea | 58.2 ± 11.1 | 61.6 ± 11.3 | 3.4 | 0.0157 |
| <i>GPR110</i> | 6 | 8126820 | 246.7 ± 123.7 | 117.4 ± 48.5 | -129.2 | 0.0002 | 0.013 | cg21577639 | Body | Open sea | 69.5 ± 6.8 | 73.6 ± 2.2 | 4.1 | 0.0133 |
| <i>GPR160</i> | 3 | 8083839 | 151.5 ± 46.6 | 117.4 ± 42.4 | -34.1 | 0.0017 | 0.033 | cg16635196 | 5'UTR | S Shore | 51.0 ± 2.8 | 55.2 ± 5.8 | 4.2 | 0.0092 |
| <i>GUK1</i> | 1 | 7910241 | 587.1 ± 53.3 | 658.1 ± 79.8 | 71.0 | 0.0002 | 0.013 | cg22521182 | Body; 5'UTR; TSS1500 | S Shelf | 80.9 ± 3.6 | 84.1 ± 2.1 | 3.2 | 0.0065 |
| <i>HIST1H1A</i> | 6 | 8124380 | 178.7 ± 90.8 | 121.4 ± 32.7 | -57.3 | 0.0012 | 0.027 | cg10146929 | 1stExon | N Shelf | 57.0 ± 5.5 | 61.0 ± 4.0 | 4.0 | 0.0235 |
| <i>HIST1H2AC</i> | 6 | 8117372 | 745.9 ± 192.9 | 660.6 ± 164.2 | -85.3 | 0.0017 | 0.033 | cg05804587 | TSS200 | N Shore | 10.2 ± 2.3 | 13.6 ± 4.3 | 3.4 | 0.0025 |
| <i>HIST1H3I</i> | 6 | 8124531 | 361.5 ± 121.2 | 274.6 ± 78.7 | -86.9 | 0.0012 | 0.027 | cg25845597 | TSS1500 | Island | 11.9 ± 6.0 | 15.7 ± 6.5 | 3.7 | 0.0137 |
| <i>HK1</i> | 10 | 7928019 | 169.7 ± 43.7 | 150.4 ± 43.5 | -19.3 | 0.0024 | 0.041 | cg04031454 | TSS1500 | Open sea | 65.9 ± 4.4 | 69.1 ± 4.2 | 3.2 | 0.0038 |
| <i>HLA-DMB</i> | 6 | 8125530 | 183.6 ± 45.3 | 134.1 ± 37.9 | -49.5 | 0.0002 | 0.013 | cg24523259 | Body | Open sea | 78.9 ± 4.2 | 82.2 ± 2.9 | 3.3 | 0.0018 |
| <i>HLA-DMB</i> | 6_qbl_hap2 | 8180078 | 177.9 ± 45.0 | 130.1 ± 39.4 | -47.9 | 0.0002 | 0.013 | cg24523259 | Body | Open sea | 78.9 ± 4.2 | 82.2 ± 2.9 | 3.3 | 0.0018 |
| <i>HMGNI</i> | X | 8176191 | 939.9 ± 66.3 | 856.7 ± 90.5 | -83.2 | 0.0024 | 0.041 | cg04973239 | 3'UTR | Open sea | 70.2 ± 4.2 | 74.7 ± 3.7 | 4.5 | 0.00003 |

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|-----------------|------------|---------|-----------------|-----------------|--------|--------|-------|------------|-------------------|----------|------------|------------|-----|--------|
| <i>ICAM2</i> | 17 | 8017547 | 86.9 ± 12.3 | 105.5 ± 20.3 | 18.6 | 0.0012 | 0.027 | cg10275770 | 5'UTR; 1stExon | Open sea | 54.0 ± 4.4 | 57.3 ± 4.6 | 3.3 | 0.0380 |
| <i>ID3</i> | 1 | 7913655 | 371.2 ± 126.9 | 278.3 ± 76.3 | -92.9 | 0.0002 | 0.013 | cg09858862 | TSS1500 | S Shore | 73.9 ± 5.0 | 77.8 ± 3.7 | 3.8 | 0.0175 |
| <i>IER3</i> | 6_cox_hap1 | 8178435 | 1,166.2 ± 400.3 | 1,669.4 ± 454.9 | 503.1 | 0.0012 | 0.027 | cg20284982 | TSS1500 | S Shore | 44.7 ± 5.2 | 48.3 ± 5.3 | 3.6 | 0.0301 |
| <i>IER3</i> | 6 | 8124848 | 960.3 ± 311.5 | 1,376.0 ± 361.6 | 415.7 | 0.0012 | 0.027 | cg20284982 | TSS1500 | S Shore | 44.7 ± 5.2 | 48.3 ± 5.3 | 3.6 | 0.0301 |
| <i>IER3</i> | 6_qbl_hap2 | 8179704 | 960.3 ± 311.5 | 1,376.0 ± 361.6 | 415.7 | 0.0012 | 0.027 | cg20284982 | TSS1500 | S Shore | 44.7 ± 5.2 | 48.3 ± 5.3 | 3.6 | 0.0301 |
| <i>IFRD1</i> | 7 | 8135514 | 341.5 ± 97.7 | 458.2 ± 161.0 | 116.8 | 0.0007 | 0.020 | cg25191332 | TSS1500 | Open sea | 70.1 ± 5.4 | 73.3 ± 5.0 | 3.2 | 0.0167 |
| <i>IGF1R</i> | 15 | 7986359 | 361.2 ± 97.4 | 307.7 ± 54.7 | -53.5 | 0.0002 | 0.013 | cg07160602 | Body | S Shelf | 69.4 ± 4.1 | 72.7 ± 4.7 | 3.2 | 0.0016 |
| <i>IGF1R</i> | 15 | 7986359 | 361.2 ± 97.4 | 307.7 ± 54.7 | -53.5 | 0.0002 | 0.013 | cg12398448 | Body | S Shore | 77.3 ± 4.6 | 81.4 ± 3.6 | 4.1 | 0.0033 |
| <i>IGF1R</i> | 15 | 7986359 | 361.2 ± 97.4 | 307.7 ± 54.7 | -53.5 | 0.0002 | 0.013 | cg05110803 | Body | Open sea | 75.5 ± 5.0 | 79.6 ± 4.8 | 4.1 | 0.0085 |
| <i>IGF1R</i> | 15 | 7986359 | 361.2 ± 97.4 | 307.7 ± 54.7 | -53.5 | 0.0002 | 0.013 | cg24122407 | Body | Open sea | 66.8 ± 8.7 | 71.2 ± 9.2 | 4.4 | 0.0084 |
| <i>IGF1R</i> | 15 | 7986383 | 474.7 ± 140.4 | 386.2 ± 85.9 | -88.5 | 0.0005 | 0.017 | cg07160602 | Body | S Shelf | 69.4 ± 4.1 | 72.7 ± 4.7 | 3.2 | 0.0016 |
| <i>IGF1R</i> | 15 | 7986383 | 474.7 ± 140.4 | 386.2 ± 85.9 | -88.5 | 0.0005 | 0.017 | cg12398448 | Body | S Shore | 77.3 ± 4.6 | 81.4 ± 3.6 | 4.1 | 0.0033 |
| <i>IGF1R</i> | 15 | 7986383 | 474.7 ± 140.4 | 386.2 ± 85.9 | -88.5 | 0.0005 | 0.017 | cg05110803 | Body | Open sea | 75.5 ± 5.0 | 79.6 ± 4.8 | 4.1 | 0.0085 |
| <i>IGF1R</i> | 15 | 7986383 | 474.7 ± 140.4 | 386.2 ± 85.9 | -88.5 | 0.0005 | 0.017 | cg24122407 | Body | Open sea | 66.8 ± 8.7 | 71.2 ± 9.2 | 4.4 | 0.0084 |
| <i>IQGAP2</i> | 5 | 8106354 | 340.9 ± 124.2 | 211.5 ± 115.6 | -129.4 | 0.0002 | 0.013 | cg16057435 | Body | Open sea | 66.8 ± 5.4 | 70.2 ± 4.9 | 3.5 | 0.0223 |
| <i>IRS2</i> | 13 | 7972745 | 169.0 ± 27.3 | 205.6 ± 33.2 | 36.6 | 0.0012 | 0.027 | cg08348990 | Body | Open sea | 74.6 ± 6.3 | 78.7 ± 6.8 | 4.0 | 0.0200 |
| <i>JAK1</i> | 1 | 7916747 | 1,423.0 ± 207.5 | 1,316.8 ± 189.7 | -106.2 | 0.0024 | 0.041 | cg02755455 | 5'UTR | Open sea | 82.4 ± 2.6 | 85.6 ± 2.2 | 3.2 | 0.0004 |
| <i>JARID2</i> | 6 | 8116998 | 187.6 ± 36.2 | 159.9 ± 31.8 | -27.7 | 0.0002 | 0.013 | cg01769037 | 5'UTR; 1stExon | S Shore | 9.6 ± 3.5 | 13.1 ± 6.4 | 3.5 | 0.0012 |
| <i>KBTBD10</i> | 2 | 8046160 | 616.8 ± 258.3 | 904.9 ± 417.8 | 288.1 | 0.0002 | 0.013 | cg10740880 | TSS1500 | Open sea | 75.5 ± 6.3 | 78.7 ± 4.8 | 3.2 | 0.0433 |
| <i>KCNK17</i> | 6 | 8126163 | 166.0 ± 82.9 | 140.6 ± 72.9 | -25.5 | 0.0002 | 0.013 | cg13075951 | TSS200 | S Shore | 61.6 ± 6.9 | 64.8 ± 7.9 | 3.2 | 0.0100 |
| <i>KCNRG</i> | 13 | 7969166 | 81.5 ± 11.8 | 65.6 ± 13.4 | -15.9 | 0.0034 | 0.049 | cg17948986 | Body; 3'UTR | Open sea | 82.2 ± 5.6 | 85.5 ± 3.7 | 3.3 | 0.0135 |
| <i>KCTD2</i> | 17 | 8009737 | 219.6 ± 19.7 | 198.9 ± 16.0 | -20.6 | 0.0005 | 0.017 | cg09185884 | Body | Open sea | 51.7 ± 7.3 | 55.8 ± 8.3 | 4.1 | 0.0088 |
| <i>KIAA0182</i> | 16 | 7997680 | 256.6 ± 40.8 | 240.6 ± 37.4 | -16.1 | 0.0034 | 0.049 | cg02563600 | 5'UTR; Body | Island | 66.0 ± 5.5 | 69.2 ± 3.9 | 3.2 | 0.0062 |
| <i>KIAA0317</i> | 14 | 7980189 | 326.5 ± 38.3 | 286.7 ± 47.8 | -39.9 | 0.0012 | 0.027 | cg01090926 | Body | Open sea | 70.3 ± 4.2 | 73.3 ± 3.0 | 3.0 | 0.0187 |
| <i>KIAA1033</i> | 12 | 7958216 | 840.0 ± 80.9 | 781.7 ± 79.4 | -58.4 | 0.0024 | 0.041 | cg09095792 | Body | S Shelf | 53.5 ± 5.8 | 57.1 ± 4.4 | 3.5 | 0.0248 |

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|------------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|-----------------|----------|-------------|-------------|-----|--------|
| <i>KIAA1244</i> | 6 | 8122279 | 574.1 ± 190.3 | 735.4 ± 279.5 | 161.2 | 0.0012 | 0.027 | cg11385476 | Body | Open sea | 53.3 ± 4.4 | 56.4 ± 4.5 | 3.1 | 0.0052 |
| <i>KIDINS220</i> | 2 | 8050128 | 991.8 ± 143.8 | 903.5 ± 123.0 | -88.3 | 0.0017 | 0.033 | cg06718139 | Body | Open sea | 62.0 ± 8.1 | 65.5 ± 7.5 | 3.6 | 0.0072 |
| <i>KLKB1</i> | 4 | 8098654 | 55.5 ± 42.1 | 40.7 ± 26.7 | -14.8 | 0.0002 | 0.013 | cg11597515 | Body | Open sea | 53.7 ± 11.2 | 57.3 ± 12.7 | 3.7 | 0.0168 |
| <i>LAMA2</i> | 6 | 8121949 | 73.7 ± 37.0 | 57.7 ± 20.2 | -16.0 | 0.0034 | 0.049 | cg15002362 | Body | Open sea | 49.5 ± 6.4 | 52.9 ± 7.7 | 3.4 | 0.0141 |
| <i>LAMA2</i> | 6 | 8121949 | 73.7 ± 37.0 | 57.7 ± 20.2 | -16.0 | 0.0034 | 0.049 | cg23621912 | Body | Open sea | 36.5 ± 4.7 | 40.0 ± 3.6 | 3.5 | 0.0026 |
| <i>LAMB1</i> | 7 | 8142194 | 608.8 ± 129.2 | 467.5 ± 101.8 | -141.3 | 0.0005 | 0.017 | cg26448609 | Body | Open sea | 73.1 ± 3.8 | 76.4 ± 2.7 | 3.3 | 0.0058 |
| <i>LAMC1</i> | 1 | 7908041 | 791.0 ± 144.6 | 662.8 ± 113.6 | -128.2 | 0.0002 | 0.013 | cg22809683 | Body | Open sea | 59.6 ± 5.4 | 63.6 ± 6.4 | 4.1 | 0.0027 |
| <i>LANCL1</i> | 2 | 8058614 | 437.1 ± 43.3 | 376.6 ± 56.6 | -60.5 | 0.0017 | 0.033 | cg13257412 | Body | N Shore | 13.0 ± 2.3 | 16.7 ± 7.0 | 3.7 | 0.0047 |
| <i>LASS6</i> | 2 | 8046086 | 1,299.1 ± 341.9 | 1,158.7 ± 267.3 | -140.4 | 0.0005 | 0.017 | cg15701842 | Body | Open sea | 72.8 ± 4.1 | 76.1 ± 3.5 | 3.3 | 0.0035 |
| <i>LGR4</i> | 11 | 7947199 | 841.3 ± 239.0 | 650.1 ± 211.1 | -191.2 | 0.0002 | 0.013 | cg16964946 | Body | Open sea | 54.1 ± 6.5 | 57.3 ± 9.4 | 3.2 | 0.0328 |
| <i>LHFP</i> | 13 | 7971150 | 131.5 ± 43.5 | 103.5 ± 28.0 | -28.0 | 0.0005 | 0.017 | cg02710723 | Body | Open sea | 81.4 ± 4.6 | 84.5 ± 5.4 | 3.1 | 0.0058 |
| <i>LHFP</i> | 13 | 7971150 | 131.5 ± 43.5 | 103.5 ± 28.0 | -28.0 | 0.0005 | 0.017 | cg15617023 | Body | Open sea | 59.0 ± 6.9 | 63.1 ± 9.5 | 4.1 | 0.0106 |
| <i>LIMA1</i> | 12 | 7963187 | 1,119.1 ± 177.0 | 868.4 ± 164.9 | -250.8 | 0.0002 | 0.013 | cg00718418 | TSS1500 | Open sea | 71.8 ± 7.0 | 75.2 ± 6.8 | 3.4 | 0.0271 |
| <i>LIMA1</i> | 12 | 7963187 | 1,119.1 ± 177.0 | 868.4 ± 164.9 | -250.8 | 0.0002 | 0.013 | cg18559571 | 3'UTR | Open sea | 75.5 ± 3.7 | 78.9 ± 3.3 | 3.4 | 0.0044 |
| <i>LIMA1</i> | 12 | 7963187 | 1,119.1 ± 177.0 | 868.4 ± 164.9 | -250.8 | 0.0002 | 0.013 | cg05903046 | Body | Open sea | 68.1 ± 3.0 | 71.7 ± 4.1 | 3.6 | 0.0133 |
| <i>LIMK2</i> | 22 | 8072461 | 188.8 ± 52.0 | 162.4 ± 27.8 | -26.4 | 0.0012 | 0.027 | cg15504662 | TSS200; Body | Open sea | 33.3 ± 8.0 | 37.0 ± 11.1 | 3.8 | 0.0236 |
| <i>LITAF</i> | 16 | 7999468 | 946.5 ± 244.1 | 817.5 ± 275.8 | -129.0 | 0.0005 | 0.017 | cg03071793 | TSS1500 | S Shore | 64.9 ± 4.8 | 69.2 ± 4.6 | 4.4 | 0.0036 |
| <i>LMCD1</i> | 3 | 8077490 | 164.3 ± 42.3 | 209.9 ± 39.7 | 45.6 | 0.0002 | 0.013 | cg16784366 | Body | Open sea | 59.3 ± 6.3 | 63.3 ± 8.9 | 4.0 | 0.0115 |
| <i>LNX2</i> | 13 | 7970716 | 662.0 ± 146.2 | 553.7 ± 125.4 | -108.3 | 0.0005 | 0.017 | cg11588787 | 5'UTR | Open sea | 30.8 ± 6.6 | 33.9 ± 8.3 | 3.0 | 0.0069 |
| <i>LOC388796</i> | 20 | 8066247 | 131.0 ± 56.0 | 153.2 ± 48.6 | 22.2 | 0.0024 | 0.041 | cg11609780 | Body | N Shelf | 78.4 ± 2.6 | 81.7 ± 3.1 | 3.3 | 0.0052 |
| <i>LONGRF1</i> | 8 | 8149399 | 234.9 ± 20.7 | 274.6 ± 43.7 | 39.7 | 0.0024 | 0.041 | cg20450712 | 3'UTR | Open sea | 78.0 ± 6.5 | 81.4 ± 2.8 | 3.3 | 0.0269 |
| <i>LPCAT2</i> | 16 | 7995697 | 114.8 ± 36.5 | 89.8 ± 26.5 | -24.9 | 0.0002 | 0.013 | cg00495811 | 3'UTR | Open sea | 62.3 ± 8.1 | 65.9 ± 8.4 | 3.5 | 0.0062 |
| <i>LRBA</i> | 4 | 8103106 | 545.8 ± 100.6 | 496.8 ± 107.2 | -49.0 | 0.0034 | 0.049 | cg14904733 | Body | S Shore | 75.9 ± 5.1 | 79.3 ± 3.9 | 3.4 | 0.0304 |
| <i>LRBA</i> | 4 | 8103106 | 545.8 ± 100.6 | 496.8 ± 107.2 | -49.0 | 0.0034 | 0.049 | cg06215107 | Body | Island | 57.6 ± 6.0 | 62.5 ± 6.0 | 4.9 | 0.0057 |
| <i>LRRC16A</i> | 6 | 8117243 | 259.2 ± 33.4 | 227.8 ± 35.7 | -31.3 | 0.0005 | 0.017 | cg17031967 | Body | Open sea | 65.0 ± 5.7 | 68.5 ± 5.5 | 3.6 | 0.0107 |

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|-----------------|----|---------|---------------|---------------|--------|--------|-------|------------|------------------------------|----------|-------------|-------------|------|--------|
| <i>LRRTM2</i> | 5 | 8114470 | 54.0 ± 15.7 | 82.2 ± 35.9 | 28.1 | 0.0002 | 0.013 | cg18712348 | TSS1500 | Open sea | 70.0 ± 4.4 | 74.1 ± 4.4 | 4.2 | 0.0044 |
| <i>LYPD1</i> | 2 | 8055314 | 260.6 ± 99.0 | 195.8 ± 70.1 | -64.8 | 0.0005 | 0.017 | cg20273260 | TSS1500; TSS200 | S Shore | 46.0 ± 6.8 | 49.6 ± 7.1 | 3.6 | 0.0045 |
| <i>MAMLD1</i> | X | 8170420 | 88.6 ± 9.3 | 101.5 ± 13.6 | 13.0 | 0.0024 | 0.041 | cg16440909 | 5'UTR; 1stExon | Open sea | 68.1 ± 16.0 | 71.3 ± 16.7 | 3.2 | 0.0367 |
| <i>MAP1B</i> | 5 | 8106098 | 751.7 ± 250.1 | 872.0 ± 256.3 | 120.3 | 0.0024 | 0.041 | cg21912162 | Body | Open sea | 60.4 ± 3.1 | 63.4 ± 4.3 | 3.1 | 0.0273 |
| <i>MAP1B</i> | 5 | 8106098 | 751.7 ± 250.1 | 872.0 ± 256.3 | 120.3 | 0.0024 | 0.041 | cg15126050 | Body | Open sea | 75.4 ± 3.8 | 78.5 ± 3.4 | 3.1 | 0.0041 |
| <i>MAP1B</i> | 5 | 8106098 | 751.7 ± 250.1 | 872.0 ± 256.3 | 120.3 | 0.0024 | 0.041 | cg17776376 | Body | Open sea | 81.8 ± 3.8 | 85.0 ± 4.4 | 3.3 | 0.0038 |
| <i>MAP1LC3A</i> | 20 | 8062023 | 207.5 ± 48.4 | 252.6 ± 70.9 | 45.1 | 0.0012 | 0.027 | cg07486199 | Body | Island | 70.7 ± 5.5 | 73.9 ± 6.0 | 3.3 | 0.0134 |
| <i>MAP2K3</i> | 17 | 8005707 | 143.1 ± 23.1 | 187.0 ± 57.7 | 43.9 | 0.0002 | 0.013 | cg11469540 | Body | S Shore | 12.0 ± 3.9 | 15.1 ± 4.5 | 3.1 | 0.0118 |
| <i>MAP6</i> | 11 | 7950524 | 133.1 ± 35.2 | 143.0 ± 33.2 | 9.9 | 0.0034 | 0.049 | cg05062413 | Body | Open sea | 64.1 ± 5.8 | 67.6 ± 5.5 | 3.5 | 0.0156 |
| <i>MAPKAP1</i> | 9 | 8164177 | 610.6 ± 66.9 | 568.3 ± 65.6 | -42.3 | 0.0012 | 0.027 | cg14146657 | 5'UTR; Body | Open sea | 66.9 ± 6.3 | 70.8 ± 7.4 | 4.0 | 0.0013 |
| <i>MATN2</i> | 8 | 8147516 | 166.8 ± 61.6 | 122.3 ± 20.2 | -44.5 | 0.0007 | 0.020 | cg19987349 | Body | Open sea | 57.2 ± 4.5 | 60.4 ± 3.1 | 3.3 | 0.0143 |
| <i>MATR3</i> | 5 | 8108403 | 952.8 ± 84.4 | 875.2 ± 94.2 | -77.6 | 0.0007 | 0.020 | cg17668981 | 5'UTR | Open sea | 54.9 ± 6.2 | 58.4 ± 6.1 | 3.5 | 0.0312 |
| <i>MED13L</i> | 12 | 7966706 | 267.3 ± 33.8 | 242.3 ± 36.1 | -25.1 | 0.0012 | 0.027 | cg05133323 | Body | Open sea | 56.2 ± 5.2 | 59.3 ± 6.2 | 3.1 | 0.0121 |
| <i>MED13L</i> | 12 | 7966706 | 267.3 ± 33.8 | 242.3 ± 36.1 | -25.1 | 0.0012 | 0.027 | cg20777829 | Body | Open sea | 57.0 ± 6.6 | 60.4 ± 8.2 | 3.4 | 0.0169 |
| <i>MED13L</i> | 12 | 7966706 | 267.3 ± 33.8 | 242.3 ± 36.1 | -25.1 | 0.0012 | 0.027 | cg15877399 | Body | Open sea | 51.5 ± 10.2 | 56.0 ± 9.4 | 4.4 | 0.0099 |
| <i>MEIS1</i> | 2 | 8042356 | 700.4 ± 59.6 | 614.9 ± 91.3 | -85.4 | 0.0012 | 0.027 | cg06994420 | Body | Island | 30.2 ± 5.1 | 26.7 ± 6.8 | -3.5 | 0.0248 |
| <i>MELK</i> | 9 | 8155214 | 58.3 ± 20.2 | 33.2 ± 9.8 | -25.1 | 0.0002 | 0.013 | cg13720890 | Body | Open sea | 84.0 ± 3.8 | 87.1 ± 3.1 | 3.1 | 0.0015 |
| <i>METTL7B</i> | 12 | 7956009 | 119.6 ± 27.9 | 89.7 ± 17.7 | -29.9 | 0.0002 | 0.013 | cg05567435 | TSS1500 | Open sea | 56.4 ± 7.3 | 59.7 ± 5.2 | 3.3 | 0.0179 |
| <i>MGST1</i> | 12 | 7954196 | 718.5 ± 211.5 | 610.5 ± 156.0 | -107.9 | 0.0017 | 0.033 | cg18233746 | TSS1500; TSS200; 5'UTR | Open sea | 40.0 ± 8.2 | 43.4 ± 7.4 | 3.4 | 0.0076 |
| <i>MKNK2</i> | 19 | 8032392 | 236.1 ± 66.3 | 277.3 ± 126.9 | 41.3 | 0.0034 | 0.049 | cg18418335 | Body | Island | 20.8 ± 5.8 | 16.0 ± 8.3 | -4.8 | 0.0053 |
| <i>MLLT11</i> | 1 | 7905329 | 429.0 ± 175.7 | 504.8 ± 202.9 | 75.8 | 0.0024 | 0.041 | cg21205392 | 5'UTR | S Shelf | 67.0 ± 4.8 | 70.5 ± 5.7 | 3.5 | 0.0149 |
| <i>MOBK2B</i> | 9 | 8160521 | 163.3 ± 43.3 | 135.9 ± 29.9 | -27.4 | 0.0002 | 0.013 | cg14643264 | Body | Open sea | 60.2 ± 8.4 | 63.4 ± 6.8 | 3.2 | 0.0126 |
| <i>MPP6</i> | 7 | 8131927 | 690.1 ± 104.8 | 627.5 ± 132.6 | -62.6 | 0.0034 | 0.049 | cg17383203 | 5'UTR | Open sea | 64.1 ± 7.6 | 67.8 ± 6.6 | 3.7 | 0.0079 |
| <i>MTA2</i> | 11 | 7948696 | 501.4 ± 34.8 | 460.3 ± 38.2 | -41.1 | 0.0007 | 0.020 | cg01538998 | 3'UTR | S Shore | 22.4 ± 4.6 | 26.0 ± 6.5 | 3.6 | 0.0023 |

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|----------------|----|---------|-------------------|-------------------|--------|--------|-------|------------|-----------------|----------|-------------|-------------|-----|---------|
| <i>MTMR12</i> | 5 | 8111339 | 475.0 ± 119.1 | 402.1 ± 100.2 | -72.9 | 0.0002 | 0.013 | cg02285003 | Body | Open sea | 64.1 ± 3.8 | 67.4 ± 4.0 | 3.3 | 0.0012 |
| <i>MTUS1</i> | 8 | 8149500 | 433.7 ± 152.1 | 363.5 ± 84.6 | -70.2 | 0.0017 | 0.033 | cg00121389 | TSS200; Body | Open sea | 42.4 ± 6.9 | 46.3 ± 9.1 | 3.9 | 0.0097 |
| <i>MYCBP2</i> | 13 | 7972069 | 256.8 ± 53.4 | 221.8 ± 44.6 | -35.0 | 0.0017 | 0.033 | cg11911128 | Body | Open sea | 69.6 ± 4.2 | 72.8 ± 4.1 | 3.2 | 0.0203 |
| <i>MYL6</i> | 12 | 7956211 | 4,630.9 ± 266.9 | 4,379.0 ± 339.0 | -251.9 | 0.0002 | 0.013 | cg01526553 | Body | Open sea | 51.8 ± 7.0 | 55.6 ± 4.1 | 3.8 | 0.0201 |
| <i>MYO6</i> | 6 | 8120783 | 535.0 ± 60.3 | 477.3 ± 69.0 | -57.6 | 0.0002 | 0.013 | cg13921196 | Body | Open sea | 18.6 ± 2.6 | 21.8 ± 3.9 | 3.3 | 0.0025 |
| <i>MYST4</i> | 10 | 7928491 | 311.9 ± 57.0 | 286.3 ± 58.5 | -25.6 | 0.0034 | 0.049 | cg07299586 | 3'UTR | Open sea | 61.3 ± 2.3 | 65.8 ± 3.6 | 4.5 | 0.0003 |
| <i>NCK2</i> | 2 | 8044133 | 469.7 ± 108.9 | 428.2 ± 108.0 | -41.5 | 0.0034 | 0.049 | cg22765178 | 5'UTR | Open sea | 79.0 ± 2.8 | 82.4 ± 2.6 | 3.4 | 0.0005 |
| <i>NDUFAF2</i> | 5 | 8105499 | 91.3 ± 9.6 | 104.9 ± 9.9 | 13.5 | 0.0005 | 0.017 | cg17944003 | Body | Open sea | 58.5 ± 8.0 | 62.1 ± 9.2 | 3.6 | 0.0231 |
| <i>NENF</i> | 1 | 7909603 | 438.7 ± 64.7 | 480.4 ± 79.9 | 41.7 | 0.0007 | 0.020 | cg04416454 | Body | S Shelf | 80.9 ± 3.7 | 85.2 ± 2.8 | 4.4 | 0.00004 |
| <i>NFIA</i> | 1 | 7901788 | 193.8 ± 30.6 | 143.5 ± 27.6 | -50.3 | 0.0002 | 0.013 | cg00560072 | Body | Open sea | 72.4 ± 4.5 | 75.8 ± 4.2 | 3.3 | 0.0094 |
| <i>NIN</i> | 14 | 7979044 | 147.5 ± 25.1 | 131.3 ± 20.4 | -16.3 | 0.0002 | 0.013 | cg12044531 | 3'UTR | Open sea | 81.6 ± 5.1 | 85.3 ± 3.4 | 3.6 | 0.0168 |
| <i>NOTCH3</i> | 19 | 8034940 | 199.0 ± 32.3 | 173.3 ± 19.1 | -25.7 | 0.0005 | 0.017 | cg22809798 | Body | N Shore | 72.8 ± 3.4 | 76.2 ± 2.9 | 3.4 | 0.0022 |
| <i>NPAT</i> | 11 | 7951497 | 230.1 ± 29.3 | 204.9 ± 34.5 | -25.2 | 0.0024 | 0.041 | cg25630123 | 3'UTR | Open sea | 65.3 ± 3.3 | 69.6 ± 4.0 | 4.3 | 0.0018 |
| <i>NR4A2</i> | 2 | 8055952 | 90.7 ± 17.7 | 127.9 ± 32.0 | 37.2 | 0.0012 | 0.027 | cg14811105 | Body | Island | 57.9 ± 6.8 | 60.9 ± 5.7 | 3.1 | 0.0279 |
| <i>NR5A2</i> | 1 | 7908597 | 1,120.8 ± 459.3 | 772.7 ± 363.5 | -348.1 | 0.0005 | 0.017 | cg16046444 | Body | N Shore | 44.0 ± 11.7 | 47.8 ± 10.2 | 3.9 | 0.0397 |
| <i>NRIP1</i> | 21 | 8069553 | 418.2 ± 56.2 | 360.8 ± 63.0 | -57.4 | 0.0002 | 0.013 | cg07543138 | 5'UTR | N Shelf | 62.6 ± 5.8 | 65.6 ± 6.3 | 3.0 | 0.0209 |
| <i>NTN4</i> | 12 | 7965573 | 482.7 ± 141.5 | 418.8 ± 134.1 | -63.9 | 0.0002 | 0.013 | cg25367249 | Body | Open sea | 58.8 ± 6.9 | 64.4 ± 7.0 | 5.6 | 0.0036 |
| <i>ODZ4</i> | 11 | 7950701 | 63.0 ± 10.1 | 75.6 ± 13.5 | 12.6 | 0.0002 | 0.013 | cg07441953 | Body | Open sea | 80.0 ± 6.0 | 83.0 ± 3.3 | 3.0 | 0.0325 |
| <i>ODZ4</i> | 11 | 7950701 | 63.0 ± 10.1 | 75.6 ± 13.5 | 12.6 | 0.0002 | 0.013 | cg26452771 | 5'UTR | Open sea | 74.2 ± 5.5 | 77.5 ± 4.7 | 3.3 | 0.0147 |
| <i>ODZ4</i> | 11 | 7950701 | 63.0 ± 10.1 | 75.6 ± 13.5 | 12.6 | 0.0002 | 0.013 | cg05340269 | 5'UTR | Open sea | 74.5 ± 3.3 | 77.8 ± 4.0 | 3.3 | 0.0033 |
| <i>ODZ4</i> | 11 | 7950701 | 63.0 ± 10.1 | 75.6 ± 13.5 | 12.6 | 0.0002 | 0.013 | cg08913922 | 5'UTR | Island | 39.2 ± 4.7 | 42.7 ± 4.3 | 3.5 | 0.0270 |
| <i>ODZ4</i> | 11 | 7950701 | 63.0 ± 10.1 | 75.6 ± 13.5 | 12.6 | 0.0002 | 0.013 | cg12830752 | 5'UTR | Open sea | 67.4 ± 6.5 | 70.9 ± 5.5 | 3.5 | 0.0069 |
| <i>PAM</i> | 5 | 8107133 | 3,515.3 ± 1,199.5 | 4,440.6 ± 1,304.3 | 925.2 | 0.0002 | 0.013 | cg20131596 | TSS1500 | N Shore | 37.9 ± 5.9 | 40.9 ± 6.6 | 3.0 | 0.0485 |
| <i>PAPPA</i> | 9 | 8157487 | 53.5 ± 17.7 | 43.5 ± 7.8 | -10.0 | 0.0002 | 0.013 | cg13656878 | Body | Open sea | 40.8 ± 9.5 | 44.1 ± 9.8 | 3.2 | 0.0088 |
| <i>PBLD</i> | 10 | 7933982 | 139.3 ± 33.7 | 115.6 ± 40.4 | -23.8 | 0.0017 | 0.033 | cg06898463 | 5'UTR | N Shore | 83.9 ± 2.2 | 87.2 ± 2.0 | 3.3 | 0.0002 |

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|-----------------|----|---------|----------------------|-------------------|---------|--------|-------|------------|----------------|----------|-------------|-------------|-----|--------|
| <i>PCK1</i> | 20 | 8063590 | 192.3 ± 120.1 | 333.5 ± 175.2 | 141.2 | 0.0024 | 0.041 | cg16994880 | 3'UTR | Open sea | 72.8 ± 11.8 | 79.5 ± 5.7 | 6.7 | 0.0080 |
| <i>PDE1A</i> | 2 | 8057486 | 42.6 ± 17.1 | 33.5 ± 10.5 | -9.1 | 0.0024 | 0.041 | cg08759112 | TSS1500 | Open sea | 38.1 ± 12.3 | 42.1 ± 13.4 | 4.0 | 0.0230 |
| <i>PDE5A</i> | 4 | 8102532 | 216.2 ± 39.3 | 165.5 ± 35.8 | -50.6 | 0.0005 | 0.017 | cg06531595 | Body | Open sea | 82.0 ± 6.2 | 85.5 ± 4.3 | 3.5 | 0.0394 |
| <i>PDE5A</i> | 4 | 8102532 | 216.2 ± 39.3 | 165.5 ± 35.8 | -50.6 | 0.0005 | 0.017 | cg23138179 | Body; 5'UTR | N Shore | 48.6 ± 9.2 | 53.9 ± 9.0 | 5.3 | 0.0303 |
| <i>PDGFD</i> | 11 | 7951351 | 436.5 ± 182.5 | 263.3 ± 147.5 | -173.2 | 0.0007 | 0.020 | cg09194202 | Body | S Shelf | 82.6 ± 4.8 | 86.2 ± 2.7 | 3.6 | 0.0031 |
| <i>PDGFRA</i> | 4 | 8095080 | 199.3 ± 131.4 | 124.0 ± 62.3 | -75.3 | 0.0002 | 0.013 | cg02759489 | 5'UTR | Island | 10.6 ± 5.1 | 14.5 ± 6.3 | 3.9 | 0.0036 |
| <i>PK4</i> | 7 | 8141094 | 2,530.7 ± 813.9 | 3,706.4 ± 941.1 | 1,175.8 | 0.0002 | 0.013 | cg03603062 | Body | N Shore | 64.6 ± 4.2 | 67.9 ± 6.0 | 3.3 | 0.0365 |
| <i>PDZD4</i> | X | 8175860 | 62.2 ± 12.4 | 74.9 ± 10.1 | 12.7 | 0.0002 | 0.013 | cg08065271 | Body | N Shelf | 64.7 ± 5.4 | 68.0 ± 7.1 | 3.3 | 0.0269 |
| <i>PI3</i> | 20 | 8062927 | 172.4 ± 90.6 | 124.0 ± 50.8 | -48.3 | 0.0024 | 0.041 | cg09462575 | TSS200 | Open sea | 48.7 ± 3.9 | 52.0 ± 4.4 | 3.3 | 0.0052 |
| <i>PIK3C2B</i> | 1 | 7923662 | 82.7 ± 9.4 | 69.6 ± 8.7 | -13.1 | 0.0005 | 0.017 | cg21195376 | 5'UTR | Open sea | 52.9 ± 5.1 | 56.0 ± 4.4 | 3.2 | 0.0366 |
| <i>PIK3R1</i> | 5 | 8105778 | 380.2 ± 80.4 | 317.7 ± 84.4 | -62.5 | 0.0005 | 0.017 | cg22592475 | Body | Open sea | 40.6 ± 4.0 | 44.6 ± 5.6 | 4.0 | 0.0010 |
| <i>PIP5K1B</i> | 9 | 8155673 | 65.4 ± 15.8 | 51.8 ± 15.4 | -13.6 | 0.0005 | 0.017 | cg13750902 | 5'UTR | N Shore | 70.7 ± 3.7 | 74.5 ± 3.4 | 3.8 | 0.0016 |
| <i>PLAT</i> | 8 | 8150509 | 692.9 ± 431.5 | 392.8 ± 163.5 | -300.1 | 0.0002 | 0.013 | cg24514275 | Body | Open sea | 64.0 ± 4.6 | 67.0 ± 3.7 | 3.0 | 0.0336 |
| <i>PLS3</i> | X | 8169473 | 826.5 ± 211.2 | 673.7 ± 174.4 | -152.8 | 0.0002 | 0.013 | cg11616384 | Body | Open sea | 49.6 ± 9.5 | 52.9 ± 10.1 | 3.3 | 0.0138 |
| <i>PLXNB2</i> | 22 | 8076998 | 508.0 ± 71.9 | 463.4 ± 74.3 | -44.6 | 0.0034 | 0.049 | cg01234546 | Body | N Shore | 60.8 ± 12.9 | 65.5 ± 12.9 | 4.7 | 0.0002 |
| <i>PNLIP</i> | 10 | 7930777 | 2,381.3 ± 1,549.5 | 1,964.5 ± 1,480.7 | -416.8 | 0.0012 | 0.027 | cg23728588 | TSS1500 | Open sea | 69.3 ± 6.5 | 72.6 ± 4.9 | 3.2 | 0.0219 |
| <i>POF1B</i> | X | 8173869 | 208.2 ± 72.6 | 154.8 ± 61.1 | -53.3 | 0.0002 | 0.013 | cg08238865 | 5'UTR | Open sea | 45.9 ± 4.3 | 48.9 ± 5.3 | 3.0 | 0.0379 |
| <i>POF1B</i> | X | 8173869 | 208.2 ± 72.6 | 154.8 ± 61.1 | -53.3 | 0.0002 | 0.013 | cg10907112 | TSS200 | Open sea | 38.5 ± 4.7 | 41.7 ± 4.8 | 3.2 | 0.0038 |
| <i>POLD3</i> | 11 | 7942527 | 183.1 ± 19.9 | 157.8 ± 23.2 | -25.3 | 0.0007 | 0.020 | cg21048411 | Body | S Shelf | 70.8 ± 6.2 | 76.1 ± 3.3 | 5.3 | 0.0080 |
| <i>PPAP2A</i> | 5 | 8112107 | 167.4 ± 25.0 | 137.1 ± 24.8 | -30.3 | 0.0002 | 0.013 | cg07862423 | Body | Island | 61.1 ± 4.8 | 64.9 ± 4.3 | 3.9 | 0.0115 |
| <i>PRICKLE1</i> | 12 | 7962375 | 140.8 ± 42.9 | 105.2 ± 25.2 | -35.5 | 0.0002 | 0.013 | cg15852150 | 5'UTR | N Shore | 66.1 ± 5.5 | 69.5 ± 6.7 | 3.4 | 0.0386 |
| <i>PRKDC</i> | 8 | 8150599 | 374.9 ± 61.5 | 322.4 ± 57.0 | -52.4 | 0.0007 | 0.020 | cg11773920 | 3'UTR | Open sea | 58.7 ± 4.4 | 62.1 ± 5.6 | 3.4 | 0.0166 |
| <i>PRKDC</i> | 8 | 8150599 | 374.9 ± 61.5 | 322.4 ± 57.0 | -52.4 | 0.0007 | 0.020 | cg22338356 | Body | Open sea | 73.4 ± 5.7 | 77.2 ± 4.1 | 3.7 | 0.0024 |
| <i>PRKDC</i> | 8 | 8150599 | 374.9 ± 61.5 | 322.4 ± 57.0 | -52.4 | 0.0007 | 0.020 | cg04024910 | Body | N Shelf | 72.5 ± 3.0 | 77.0 ± 3.6 | 4.5 | 0.0003 |
| <i>PTCD3</i> | 2 | 8043251 | 542.9 ± 61.5 | 484.8 ± 73.8 | -58.1 | 0.0024 | 0.041 | cg19622777 | Body | Open sea | 78.0 ± 2.9 | 81.6 ± 2.9 | 3.6 | 0.0067 |

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|-----------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|---------|----------|-------------|-------------|------|--------|
| <i>PTCD3</i> | 2 | 8043251 | 542.9 ± 61.5 | 484.8 ± 73.8 | -58.1 | 0.0024 | 0.041 | cg00350932 | Body | S Shelf | 42.9 ± 7.8 | 47.5 ± 9.8 | 4.5 | 0.0103 |
| <i>PTP4A1</i> | 6 | 8120431 | 1,844.6 ± 245.8 | 1,727.6 ± 233.7 | -117.0 | 0.0002 | 0.013 | cg12857652 | Body | Open sea | 54.3 ± 8.9 | 51.0 ± 8.9 | -3.2 | 0.0455 |
| <i>PXDN</i> | 2 | 8050007 | 319.5 ± 149.3 | 235.8 ± 69.4 | -83.7 | 0.0024 | 0.041 | cg12760299 | Body | Open sea | 37.7 ± 7.9 | 41.1 ± 6.9 | 3.4 | 0.0276 |
| <i>PXDN</i> | 2 | 8050007 | 319.5 ± 149.3 | 235.8 ± 69.4 | -83.7 | 0.0024 | 0.041 | cg07029777 | Body | Open sea | 73.9 ± 3.7 | 77.8 ± 3.2 | 3.9 | 0.0014 |
| <i>RABGAP1L</i> | 1 | 7907492 | 196.7 ± 30.1 | 175.6 ± 34.2 | -21.0 | 0.0005 | 0.017 | cg05768419 | Body | Open sea | 55.8 ± 12.9 | 60.1 ± 11.7 | 4.3 | 0.0006 |
| <i>RASAL2</i> | 1 | 7907611 | 114.5 ± 20.7 | 101.4 ± 14.8 | -13.1 | 0.0017 | 0.033 | cg00112588 | TSS1500 | N Shore | 53.7 ± 4.6 | 56.7 ± 3.7 | 3.0 | 0.0171 |
| <i>RASAL2</i> | 1 | 7907611 | 114.5 ± 20.7 | 101.4 ± 14.8 | -13.1 | 0.0017 | 0.033 | cg22685215 | Body | Open sea | 56.7 ± 5.4 | 60.0 ± 5.8 | 3.4 | 0.0245 |
| <i>RBCK1</i> | 20 | 8060353 | 161.7 ± 14.5 | 176.5 ± 17.9 | 14.8 | 0.0034 | 0.049 | cg13812132 | Body | S Shelf | 75.5 ± 2.9 | 79.1 ± 2.7 | 3.7 | 0.0009 |
| <i>RBM47</i> | 4 | 8099967 | 1,112.2 ± 121.3 | 988.7 ± 146.7 | -123.5 | 0.0034 | 0.049 | cg09141635 | 5'UTR | Open sea | 42.6 ± 6.4 | 45.9 ± 5.7 | 3.3 | 0.0395 |
| <i>RCBTB2</i> | 13 | 7971573 | 133.8 ± 38.4 | 114.5 ± 29.4 | -19.3 | 0.0002 | 0.013 | cg17300047 | TSS1500 | S Shore | 66.0 ± 3.0 | 69.3 ± 1.8 | 3.3 | 0.0031 |
| <i>RFTN1</i> | 3 | 8085665 | 68.6 ± 11.2 | 61.0 ± 6.3 | -7.6 | 0.0002 | 0.013 | cg26792295 | 5'UTR | Open sea | 77.5 ± 3.5 | 81.2 ± 2.4 | 3.7 | 0.0035 |
| <i>RGL1</i> | 1 | 7908125 | 274.4 ± 70.5 | 231.9 ± 61.1 | -42.5 | 0.0005 | 0.017 | cg13951632 | 3'UTR | Open sea | 80.3 ± 4.2 | 83.4 ± 1.9 | 3.1 | 0.0072 |
| <i>RGL1</i> | 1 | 7908125 | 274.4 ± 70.5 | 231.9 ± 61.1 | -42.5 | 0.0005 | 0.017 | cg12425286 | 5'UTR | Open sea | 76.4 ± 3.9 | 80.1 ± 4.2 | 3.7 | 0.0087 |
| <i>RGNEF</i> | 5 | 8106210 | 169.2 ± 32.0 | 147.9 ± 33.9 | -21.3 | 0.0024 | 0.041 | cg04480106 | 5'UTR | Open sea | 58.8 ± 9.9 | 63.3 ± 8.1 | 4.5 | 0.0113 |
| <i>RGSI7</i> | 6 | 8130394 | 163.9 ± 30.8 | 205.8 ± 51.1 | 41.8 | 0.0007 | 0.020 | cg24028809 | 5'UTR | Open sea | 45.7 ± 11.2 | 49.4 ± 11.2 | 3.7 | 0.0131 |
| <i>RGS7</i> | 1 | 7925457 | 131.0 ± 56.5 | 164.1 ± 67.7 | 33.1 | 0.0012 | 0.027 | cg09786278 | Body | Open sea | 74.2 ± 5.1 | 77.5 ± 4.6 | 3.3 | 0.0006 |
| <i>RIMBP2</i> | 12 | 7967660 | 189.5 ± 72.0 | 224.4 ± 77.6 | 34.8 | 0.0012 | 0.027 | cg05308244 | 5'UTR | Open sea | 58.8 ± 22.7 | 62.3 ± 22.3 | 3.5 | 0.0045 |
| <i>RIN2</i> | 20 | 8061247 | 336.8 ± 74.2 | 290.2 ± 69.0 | -46.6 | 0.0017 | 0.033 | cg04466743 | Body | Open sea | 62.4 ± 4.1 | 65.4 ± 5.5 | 3.0 | 0.0301 |
| <i>RIN2</i> | 20 | 8061247 | 336.8 ± 74.2 | 290.2 ± 69.0 | -46.6 | 0.0017 | 0.033 | cg09035925 | Body | Open sea | 34.9 ± 5.1 | 38.3 ± 6.7 | 3.5 | 0.0083 |
| <i>RIN2</i> | 20 | 8061247 | 336.8 ± 74.2 | 290.2 ± 69.0 | -46.6 | 0.0017 | 0.033 | cg26396492 | Body | Open sea | 32.6 ± 4.7 | 36.3 ± 6.1 | 3.7 | 0.0037 |
| <i>RIN2</i> | 20 | 8061247 | 336.8 ± 74.2 | 290.2 ± 69.0 | -46.6 | 0.0017 | 0.033 | cg18952506 | Body | Open sea | 24.9 ± 7.0 | 28.8 ± 9.6 | 4.0 | 0.0065 |
| <i>ROBO1</i> | 3 | 8088919 | 306.9 ± 118.7 | 273.6 ± 104.6 | -33.2 | 0.0012 | 0.027 | cg08147563 | Body | Open sea | 43.5 ± 6.6 | 47.7 ± 5.8 | 4.2 | 0.0006 |
| <i>RPH3AL</i> | 17 | 8010903 | 214.8 ± 77.7 | 249.2 ± 102.3 | 34.4 | 0.0017 | 0.033 | cg06562014 | Body | Open sea | 67.7 ± 3.5 | 70.8 ± 3.4 | 3.1 | 0.0059 |
| <i>RPH3AL</i> | 17 | 8010903 | 214.8 ± 77.7 | 249.2 ± 102.3 | 34.4 | 0.0017 | 0.033 | cg12887033 | Body | S Shelf | 54.4 ± 7.3 | 57.5 ± 6.2 | 3.1 | 0.0140 |
| <i>RPH3AL</i> | 17 | 8010903 | 214.8 ± 77.7 | 249.2 ± 102.3 | 34.4 | 0.0017 | 0.033 | cg22251117 | 5'UTR | N Shelf | 63.6 ± 5.0 | 66.7 ± 4.9 | 3.1 | 0.0202 |

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|---------------|------------|---------|-----------------|-----------------|-------|--------|-------|------------|-------------------|----------|------------|------------|-----|--------|
| <i>RPH3AL</i> | 17 | 8010903 | 214.8 ± 77.7 | 249.2 ± 102.3 | 34.4 | 0.0017 | 0.033 | cg18771195 | 5'UTR | N Shelf | 67.2 ± 6.5 | 71.0 ± 5.6 | 3.7 | 0.0217 |
| <i>RPL18A</i> | 2 | 8052022 | 532.4 ± 155.4 | 587.8 ± 122.2 | 55.4 | 0.0017 | 0.033 | cg06508005 | Body | S Shore | 60.5 ± 2.8 | 64.4 ± 3.7 | 3.9 | 0.0008 |
| <i>RPL24</i> | 6 | 8126450 | 2,123.5 ± 278.9 | 2,342.1 ± 267.1 | 218.6 | 0.0005 | 0.017 | cg06789412 | 1stExon; 5'UTR | Island | 8.4 ± 4.5 | 11.8 ± 7.0 | 3.4 | 0.0118 |
| <i>RPL24</i> | 3 | 8089249 | 3,145.3 ± 364.1 | 3,459.5 ± 387.4 | 314.2 | 0.0002 | 0.013 | cg06789412 | 1stExon; 5'UTR | Island | 8.4 ± 4.5 | 11.8 ± 7.0 | 3.4 | 0.0118 |
| <i>RPL29</i> | 3 | 8086148 | 3,676.1 ± 655.2 | 4,022.2 ± 594.6 | 346.1 | 0.0007 | 0.020 | cg06489668 | TSS1500 | S Shore | 69.0 ± 3.5 | 72.2 ± 5.1 | 3.3 | 0.0389 |
| <i>RPL30</i> | 8 | 8151935 | 2,859.9 ± 228.0 | 3,084.9 ± 256.3 | 224.9 | 0.0007 | 0.020 | cg12992040 | Body | N Shelf | 74.1 ± 5.3 | 77.2 ± 4.9 | 3.1 | 0.0160 |
| <i>RPL39</i> | 6 | 8127526 | 1,159.5 ± 234.8 | 1,305.8 ± 258.0 | 146.3 | 0.0002 | 0.013 | cg22865905 | Body | N Shelf | 53.5 ± 5.7 | 56.8 ± 5.8 | 3.3 | 0.0087 |
| <i>RPL39</i> | X | 8174710 | 1,108.4 ± 221.3 | 1,245.2 ± 237.3 | 136.8 | 0.0005 | 0.017 | cg22865905 | Body | N Shelf | 53.5 ± 5.7 | 56.8 ± 5.8 | 3.3 | 0.0087 |
| <i>RPL41</i> | 12 | 7956159 | 112.1 ± 18.0 | 137.9 ± 23.4 | 25.8 | 0.0002 | 0.013 | cg25161889 | TSS1500 | N Shelf | 41.1 ± 4.3 | 44.3 ± 6.7 | 3.2 | 0.0412 |
| <i>RPL41</i> | 20 | 8061364 | 5,182.7 ± 350.5 | 5,436.7 ± 427.7 | 254.0 | 0.0005 | 0.017 | cg25161889 | TSS1500 | N Shelf | 41.1 ± 4.3 | 44.3 ± 6.7 | 3.2 | 0.0412 |
| <i>RPL41</i> | 22 | 8075691 | 5,435.0 ± 336.7 | 5,678.5 ± 445.2 | 243.6 | 0.0002 | 0.013 | cg25161889 | TSS1500 | N Shelf | 41.1 ± 4.3 | 44.3 ± 6.7 | 3.2 | 0.0412 |
| <i>RPL41</i> | 5 | 8105432 | 5,306.0 ± 323.5 | 5,536.2 ± 433.4 | 230.2 | 0.0005 | 0.017 | cg25161889 | TSS1500 | N Shelf | 41.1 ± 4.3 | 44.3 ± 6.7 | 3.2 | 0.0412 |
| <i>RPS18</i> | 6 | 8118644 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg12086028 | Body | S Shore | 52.4 ± 3.9 | 55.9 ± 5.3 | 3.6 | 0.0118 |
| <i>RPS18</i> | 6 | 8118644 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg05560494 | Body | S Shore | 65.2 ± 3.6 | 69.1 ± 3.0 | 3.9 | 0.0018 |
| <i>RPS18</i> | 6 | 8118644 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg24664526 | TSS1500 | Island | 8.6 ± 3.5 | 12.7 ± 6.9 | 4.1 | 0.0023 |
| <i>RPS18</i> | 6_cox_hap1 | 8178253 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg12086028 | Body | S Shore | 52.4 ± 3.9 | 55.9 ± 5.3 | 3.6 | 0.0118 |
| <i>RPS18</i> | 6_cox_hap1 | 8178253 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg05560494 | Body | S Shore | 65.2 ± 3.6 | 69.1 ± 3.0 | 3.9 | 0.0018 |
| <i>RPS18</i> | 6_cox_hap1 | 8178253 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg24664526 | TSS1500 | Island | 8.6 ± 3.5 | 12.7 ± 6.9 | 4.1 | 0.0023 |
| <i>RPS18</i> | 6_qbl_hap2 | 8179544 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg12086028 | Body | S Shore | 52.4 ± 3.9 | 55.9 ± 5.3 | 3.6 | 0.0118 |
| <i>RPS18</i> | 6_qbl_hap2 | 8179544 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg05560494 | Body | S Shore | 65.2 ± 3.6 | 69.1 ± 3.0 | 3.9 | 0.0018 |
| <i>RPS18</i> | 6_qbl_hap2 | 8179544 | 1,928.1 ± 361.3 | 2,116.1 ± 382.8 | 188.0 | 0.0034 | 0.049 | cg24664526 | TSS1500 | Island | 8.6 ± 3.5 | 12.7 ± 6.9 | 4.1 | 0.0023 |
| <i>RTKN</i> | 2 | 8053142 | 141.7 ± 16.0 | 157.6 ± 17.9 | 15.9 | 0.0002 | 0.013 | cg22442732 | Body | N Shelf | 67.6 ± 5.9 | 71.2 ± 4.2 | 3.7 | 0.0249 |
| <i>SAMD12</i> | 8 | 8152506 | 109.6 ± 16.5 | 90.3 ± 15.8 | -19.3 | 0.0017 | 0.033 | cg22533992 | Body | Open sea | 70.4 ± 4.0 | 73.6 ± 6.0 | 3.2 | 0.0235 |
| <i>SCD5</i> | 4 | 8101366 | 205.9 ± 57.3 | 179.7 ± 58.0 | -26.3 | 0.0005 | 0.017 | cg09031823 | Body | Open sea | 56.5 ± 7.9 | 59.9 ± 8.1 | 3.4 | 0.0087 |
| <i>SEC24D</i> | 4 | 8102482 | 598.9 ± 145.2 | 726.1 ± 161.3 | 127.3 | 0.0005 | 0.017 | cg04428346 | Body | Open sea | 57.4 ± 6.6 | 61.8 ± 7.2 | 4.4 | 0.0003 |

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|----------------|----|---------|-----------------|-----------------|--------|--------|-------|------------|--------------------|----------|-------------|-------------|-----|--------|
| <i>SEL1L</i> | 14 | 7980547 | 1,149.9 ± 154.0 | 1,217.1 ± 162.3 | 67.2 | 0.0034 | 0.049 | cg23295683 | Body | N Shore | 52.3 ± 5.6 | 56.0 ± 5.2 | 3.7 | 0.0094 |
| <i>SEMA6A</i> | 5 | 8113666 | 202.4 ± 59.3 | 158.2 ± 59.7 | -44.3 | 0.0002 | 0.013 | cg06583577 | 5'UTR | Open sea | 70.2 ± 5.9 | 73.9 ± 4.4 | 3.7 | 0.0128 |
| <i>SGSM1</i> | 22 | 8071953 | 86.7 ± 24.7 | 97.1 ± 22.2 | 10.3 | 0.0017 | 0.033 | cg03942471 | Body | S Shelf | 73.0 ± 2.7 | 76.2 ± 2.4 | 3.2 | 0.0028 |
| <i>SH3BP5</i> | 3 | 8085556 | 84.6 ± 11.5 | 103.3 ± 17.0 | 18.7 | 0.0002 | 0.013 | cg05046996 | TSS200 | Open sea | 51.8 ± 5.3 | 54.8 ± 3.8 | 3.0 | 0.0152 |
| <i>SH3BP5</i> | 3 | 8085556 | 84.6 ± 11.5 | 103.3 ± 17.0 | 18.7 | 0.0002 | 0.013 | cg18444702 | Body; 5'UTR | Open sea | 55.0 ± 6.0 | 58.2 ± 6.3 | 3.2 | 0.0235 |
| <i>SH3BP5</i> | 3 | 8085556 | 84.6 ± 11.5 | 103.3 ± 17.0 | 18.7 | 0.0002 | 0.013 | cg03495084 | Body | Open sea | 67.4 ± 6.2 | 71.7 ± 8.1 | 4.3 | 0.0409 |
| <i>SHCBP1</i> | 16 | 8001133 | 71.5 ± 38.5 | 38.1 ± 8.6 | -33.4 | 0.0002 | 0.013 | cg04112058 | Body | Open sea | 57.0 ± 6.4 | 60.0 ± 6.2 | 3.0 | 0.0302 |
| <i>SHMT2</i> | 12 | 7956401 | 548.7 ± 125.7 | 643.2 ± 157.6 | 94.5 | 0.0005 | 0.017 | cg26220528 | TSS1500; TSS200 | N Shore | 5.6 ± 4.0 | 9.3 ± 7.6 | 3.7 | 0.0009 |
| <i>SIPA1L1</i> | 14 | 7975459 | 282.5 ± 31.1 | 257.3 ± 33.9 | -25.2 | 0.0012 | 0.027 | cg02058870 | 5'UTR | Open sea | 34.2 ± 13.2 | 37.4 ± 13.1 | 3.2 | 0.0249 |
| <i>SIPA1L1</i> | 14 | 7975459 | 282.5 ± 31.1 | 257.3 ± 33.9 | -25.2 | 0.0012 | 0.027 | cg10727432 | Body | Open sea | 64.6 ± 5.4 | 68.1 ± 5.8 | 3.5 | 0.0027 |
| <i>SLC16A7</i> | 12 | 7956658 | 411.4 ± 151.2 | 308.9 ± 128.7 | -102.6 | 0.0002 | 0.013 | cg26090940 | Body | Open sea | 64.1 ± 6.1 | 67.3 ± 7.1 | 3.2 | 0.0052 |
| <i>SLC24A6</i> | 12 | 7966600 | 106.2 ± 23.8 | 94.2 ± 23.8 | -11.9 | 0.0005 | 0.017 | cg22510037 | 5'UTR | N Shore | 28.9 ± 8.5 | 32.1 ± 8.3 | 3.1 | 0.0248 |
| <i>SLC38A9</i> | 5 | 8112121 | 246.5 ± 39.5 | 201.6 ± 42.6 | -44.9 | 0.0005 | 0.017 | cg07042489 | Body | Open sea | 79.4 ± 3.3 | 82.4 ± 3.2 | 3.0 | 0.0061 |
| <i>SLC7A7</i> | 14 | 7977786 | 67.1 ± 20.4 | 53.4 ± 12.5 | -13.6 | 0.0007 | 0.020 | cg12775909 | TSS1500; 5'UTR | Open sea | 78.3 ± 5.4 | 81.7 ± 3.8 | 3.4 | 0.0073 |
| <i>SLC7A7</i> | 14 | 7977786 | 67.1 ± 20.4 | 53.4 ± 12.5 | -13.6 | 0.0007 | 0.020 | cg20495370 | Body | Open sea | 52.1 ± 6.2 | 55.6 ± 6.4 | 3.5 | 0.0469 |
| <i>SMAD3</i> | 15 | 7984364 | 364.4 ± 161.7 | 326.4 ± 190.1 | -38.0 | 0.0024 | 0.041 | cg15799109 | Body; 5'UTR | Open sea | 75.6 ± 5.8 | 78.7 ± 5.7 | 3.1 | 0.0487 |
| <i>SOCS5</i> | 2 | 8041820 | 335.0 ± 40.0 | 300.9 ± 46.7 | -34.1 | 0.0017 | 0.033 | cg12224879 | 5'UTR | Open sea | 57.2 ± 5.6 | 60.4 ± 3.8 | 3.2 | 0.0088 |
| <i>SPRED1</i> | 15 | 7982564 | 238.0 ± 47.0 | 208.6 ± 32.5 | -29.4 | 0.0024 | 0.041 | cg03028506 | Body | Open sea | 69.2 ± 4.6 | 72.6 ± 4.5 | 3.4 | 0.0089 |
| <i>SPTLC3</i> | 20 | 8060997 | 102.3 ± 25.6 | 82.1 ± 20.3 | -20.2 | 0.0024 | 0.041 | cg11745355 | Body | Open sea | 61.2 ± 3.6 | 64.6 ± 2.3 | 3.4 | 0.0053 |
| <i>SRP9</i> | 1 | 7910099 | 1,084.0 ± 97.6 | 1,000.7 ± 113.8 | -83.3 | 0.0034 | 0.049 | cg00311360 | Body; 3'UTR | Open sea | 79.0 ± 3.9 | 82.1 ± 3.4 | 3.1 | 0.0054 |
| <i>SRP9</i> | 1 | 7910099 | 1,084.0 ± 97.6 | 1,000.7 ± 113.8 | -83.3 | 0.0034 | 0.049 | cg26298737 | TSS1500 | N Shore | 35.5 ± 6.7 | 38.8 ± 7.1 | 3.2 | 0.0049 |
| <i>SRP9</i> | 10 | 7935002 | 1,605.0 ± 135.9 | 1,468.0 ± 172.7 | -137.0 | 0.0012 | 0.027 | cg00311360 | Body; 3'UTR | Open sea | 79.0 ± 3.9 | 82.1 ± 3.4 | 3.1 | 0.0054 |
| <i>SRP9</i> | 10 | 7935002 | 1,605.0 ± 135.9 | 1,468.0 ± 172.7 | -137.0 | 0.0012 | 0.027 | cg26298737 | TSS1500 | N Shore | 35.5 ± 6.7 | 38.8 ± 7.1 | 3.2 | 0.0049 |
| <i>ST7</i> | 7 | 8135638 | 244.6 ± 36.1 | 271.4 ± 41.6 | 26.8 | 0.0024 | 0.041 | cg00764217 | Body | Open sea | 25.0 ± 8.1 | 28.2 ± 8.9 | 3.2 | 0.0176 |

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|------------------------|----|---------|---------------|---------------|--------|--------|-------|------------|---------|----------|-------------|-------------|-----|--------|
| <i>ST7</i> | 7 | 8135638 | 244.6 ± 36.1 | 271.4 ± 41.6 | 26.8 | 0.0024 | 0.041 | cg24895142 | Body | Open sea | 33.4 ± 11.0 | 37.1 ± 10.2 | 3.7 | 0.0395 |
| <i>STAT5B</i> | 17 | 8015590 | 263.3 ± 25.1 | 305.8 ± 40.2 | 42.5 | 0.0017 | 0.033 | cg07402310 | 5'UTR | N Shelf | 73.9 ± 4.6 | 77.1 ± 3.4 | 3.3 | 0.0091 |
| <i>STK17B</i> | 2 | 8057887 | 286.7 ± 59.3 | 244.7 ± 55.9 | -42.1 | 0.0007 | 0.020 | cg15023571 | 5'UTR | N Shore | 25.8 ± 4.8 | 28.8 ± 5.5 | 3.0 | 0.0099 |
| <i>STMN1</i> | 1 | 7913869 | 293.6 ± 31.6 | 251.5 ± 55.8 | -42.2 | 0.0005 | 0.017 | cg09518245 | TSS1500 | S Shore | 69.7 ± 3.6 | 74.0 ± 3.4 | 4.3 | 0.0019 |
| <i>TANC1</i> | 2 | 8045889 | 129.1 ± 27.8 | 112.5 ± 20.9 | -16.6 | 0.0024 | 0.041 | cg25348841 | 5'UTR | Open sea | 78.4 ± 3.1 | 81.4 ± 4.0 | 3.0 | 0.0204 |
| <i>TANC1</i> | 2 | 8045889 | 129.1 ± 27.8 | 112.5 ± 20.9 | -16.6 | 0.0024 | 0.041 | cg21216100 | Body | Open sea | 77.6 ± 5.9 | 82.1 ± 3.7 | 4.6 | 0.0028 |
| <i>TAOK3</i> | 12 | 7966851 | 317.4 ± 35.0 | 274.6 ± 34.7 | -42.8 | 0.0007 | 0.020 | cg20353780 | 3'UTR | Open sea | 58.9 ± 6.2 | 62.6 ± 6.2 | 3.7 | 0.0054 |
| <i>TBC1D1</i> | 4 | 8094574 | 269.5 ± 31.2 | 230.7 ± 20.1 | -38.8 | 0.0002 | 0.013 | cg09569989 | Body | Open sea | 65.9 ± 5.6 | 69.2 ± 6.4 | 3.2 | 0.0254 |
| <i>TBC1D1</i> | 4 | 8094574 | 269.5 ± 31.2 | 230.7 ± 20.1 | -38.8 | 0.0002 | 0.013 | cg19090437 | Body | Open sea | 57.2 ± 4.3 | 60.8 ± 5.8 | 3.6 | 0.0120 |
| <i>TBC1D1</i> | 4 | 8094574 | 269.5 ± 31.2 | 230.7 ± 20.1 | -38.8 | 0.0002 | 0.013 | cg10278506 | Body | Open sea | 74.9 ± 3.6 | 78.7 ± 3.4 | 3.8 | 0.0011 |
| <i>TBC1D1</i> | 4 | 8094574 | 269.5 ± 31.2 | 230.7 ± 20.1 | -38.8 | 0.0002 | 0.013 | cg17508905 | Body | Open sea | 71.0 ± 3.5 | 75.2 ± 3.6 | 4.2 | 0.0006 |
| <i>TBXAS1</i> | 7 | 8136557 | 117.7 ± 33.2 | 95.1 ± 23.8 | -22.5 | 0.0007 | 0.020 | cg07590004 | 5'UTR | Open sea | 81.6 ± 3.8 | 84.9 ± 2.3 | 3.3 | 0.0002 |
| <i>TCF12</i> | 15 | 7983843 | 512.5 ± 59.2 | 460.3 ± 51.2 | -52.2 | 0.0024 | 0.041 | cg26810157 | 3'UTR | Open sea | 54.4 ± 12.4 | 58.1 ± 12.9 | 3.7 | 0.0460 |
| <i>TCF7L2</i> | 10 | 7930537 | 215.1 ± 30.9 | 180.2 ± 28.9 | -34.9 | 0.0002 | 0.013 | cg26775558 | Body | Open sea | 56.5 ± 10.0 | 60.4 ± 9.2 | 3.9 | 0.0060 |
| <i>TFDP2</i> | 3 | 8091103 | 319.3 ± 39.2 | 272.5 ± 46.1 | -46.9 | 0.0002 | 0.013 | cg21593986 | TSS1500 | Open sea | 79.8 ± 3.0 | 83.2 ± 2.4 | 3.4 | 0.0022 |
| <i>TGFBR2</i> | 3 | 8078350 | 267.5 ± 55.9 | 234.6 ± 59.9 | -32.9 | 0.0034 | 0.049 | cg21814995 | Body | Open sea | 43.5 ± 9.7 | 46.8 ± 8.6 | 3.3 | 0.0055 |
| <i>TMC5</i> | 16 | 7993638 | 512.3 ± 193.4 | 388.7 ± 182.5 | -123.5 | 0.0002 | 0.013 | cg07998072 | 5'UTR | S Shelf | 77.1 ± 3.5 | 80.5 ± 3.1 | 3.4 | 0.0091 |
| <i>TMC7</i> | 16 | 7993588 | 76.8 ± 22.1 | 68.4 ± 19.1 | -8.4 | 0.0024 | 0.041 | cg06428742 | TSS1500 | N Shore | 66.3 ± 4.6 | 69.7 ± 4.5 | 3.4 | 0.0152 |
| <i>TMEM2</i> | 9 | 8161701 | 489.1 ± 123.3 | 441.4 ± 109.9 | -47.8 | 0.0034 | 0.049 | cg14565465 | 3'UTR | Open sea | 54.0 ± 9.2 | 57.2 ± 8.4 | 3.3 | 0.0433 |
| <i>TMEM200A</i> | 6 | 8122038 | 113.3 ± 61.9 | 148.8 ± 59.3 | 35.5 | 0.0012 | 0.027 | cg26931050 | TSS1500 | Open sea | 78.2 ± 4.8 | 82.1 ± 3.6 | 3.9 | 0.0048 |
| <i>TMEM63B</i> | 6 | 8119926 | 168.6 ± 21.2 | 149.1 ± 19.3 | -19.4 | 0.0034 | 0.049 | cg00507055 | Body | N Shore | 83.8 ± 4.6 | 86.9 ± 2.8 | 3.1 | 0.0065 |
| <i>TMEM9B</i> | 11 | 7946439 | 627.4 ± 76.8 | 557.3 ± 68.0 | -70.1 | 0.0002 | 0.013 | cg16733419 | Body | N Shelf | 49.2 ± 4.0 | 52.7 ± 4.0 | 3.4 | 0.0057 |
| <i>TNFSF12-TNFSF13</i> | 17 | 8004464 | 110.5 ± 11.6 | 121.9 ± 13.5 | 11.4 | 0.0024 | 0.041 | cg08090557 | Body | N Shore | 49.0 ± 3.9 | 52.1 ± 5.3 | 3.1 | 0.0050 |
| <i>TRAM2</i> | 6 | 8127051 | 124.4 ± 25.5 | 105.7 ± 18.9 | -18.8 | 0.0017 | 0.033 | cg12793314 | Body | Open sea | 82.9 ± 2.5 | 86.1 ± 2.8 | 3.1 | 0.0020 |
| <i>TRIM22</i> | 11 | 7938035 | 161.8 ± 53.4 | 111.8 ± 34.1 | -49.9 | 0.0005 | 0.017 | cg17025642 | TSS1500 | Open sea | 78.6 ± 6.0 | 82.1 ± 2.8 | 3.5 | 0.0271 |

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|----------------|------------|---------|-----------------|-----------------|--------|--------|-------|------------|----------------|----------|-------------|-------------|------|--------|
| <i>TSPAN4</i> | 11 | 7937518 | 108.7 ± 14.1 | 117.3 ± 12.8 | 8.6 | 0.0017 | 0.033 | cg15164881 | 5'UTR; Body | Island | 66.9 ± 5.4 | 71.4 ± 4.1 | 4.6 | 0.0105 |
| <i>TSPYL1</i> | 6 | 8129099 | 1,368.2 ± 169.9 | 1,268.3 ± 147.7 | -100.0 | 0.0024 | 0.041 | cg19341652 | 1stExon | N Shore | 17.8 ± 3.1 | 20.9 ± 3.0 | 3.1 | 0.0021 |
| <i>TSPYL2</i> | X | 8167763 | 187.6 ± 55.3 | 254.8 ± 62.1 | 67.2 | 0.0005 | 0.017 | cg22170936 | TSS200 | Island | 28.8 ± 19.5 | 25.7 ± 16.6 | -3.1 | 0.0364 |
| <i>TUBA1C</i> | 12 | 7955179 | 475.0 ± 129.8 | 538.5 ± 133.4 | 63.5 | 0.0034 | 0.049 | cg19426128 | 3'UTR | Open sea | 78.9 ± 4.9 | 83.4 ± 2.9 | 4.4 | 0.0049 |
| <i>TUBB2B</i> | 6 | 8123651 | 246.5 ± 63.7 | 292.8 ± 80.0 | 46.3 | 0.0007 | 0.020 | cg24138650 | 3'UTR | Island | 76.3 ± 2.2 | 79.4 ± 1.4 | 3.2 | 0.0013 |
| <i>UACA</i> | 15 | 7990054 | 122.9 ± 27.6 | 94.2 ± 21.1 | -28.7 | 0.0007 | 0.020 | cg10177766 | Body | Open sea | 78.0 ± 5.1 | 81.4 ± 4.9 | 3.4 | 0.0326 |
| <i>UBD</i> | 6 | 8124650 | 364.3 ± 192.3 | 260.4 ± 144.7 | -103.9 | 0.0005 | 0.017 | cg14809932 | Body | S Shelf | 63.1 ± 4.4 | 66.4 ± 5.5 | 3.3 | 0.0108 |
| <i>UBD</i> | 6_cox_hap1 | 8178295 | 345.5 ± 178.3 | 246.1 ± 137.0 | -99.4 | 0.0002 | 0.013 | cg14809932 | Body | S Shelf | 63.1 ± 4.4 | 66.4 ± 5.5 | 3.3 | 0.0108 |
| <i>UBR2</i> | 6 | 8119529 | 493.6 ± 68.7 | 452.6 ± 73.5 | -41.0 | 0.0005 | 0.017 | cg20646500 | Body | S Shelf | 40.4 ± 9.3 | 45.2 ± 7.1 | 4.9 | 0.0111 |
| <i>UTRN</i> | 6 | 8122464 | 201.0 ± 30.7 | 177.9 ± 34.7 | -23.1 | 0.0024 | 0.041 | cg22560545 | TSS200 | Open sea | 62.4 ± 6.5 | 65.4 ± 7.7 | 3.0 | 0.0352 |
| <i>UTRN</i> | 6 | 8122464 | 201.0 ± 30.7 | 177.9 ± 34.7 | -23.1 | 0.0024 | 0.041 | cg26926221 | Body | Open sea | 39.3 ± 4.6 | 42.4 ± 3.8 | 3.1 | 0.0147 |
| <i>UTRN</i> | 6 | 8122464 | 201.0 ± 30.7 | 177.9 ± 34.7 | -23.1 | 0.0024 | 0.041 | cg01524618 | Body | Open sea | 40.4 ± 7.0 | 43.6 ± 7.0 | 3.1 | 0.0178 |
| <i>UTRN</i> | 6 | 8122464 | 201.0 ± 30.7 | 177.9 ± 34.7 | -23.1 | 0.0024 | 0.041 | cg13800496 | Body | Open sea | 36.0 ± 4.0 | 39.3 ± 3.8 | 3.3 | 0.0036 |
| <i>UXT</i> | X | 8172358 | 421.2 ± 36.9 | 484.0 ± 32.8 | 62.7 | 0.0012 | 0.027 | cg03689540 | Body | N Shore | 62.7 ± 6.7 | 67.1 ± 4.4 | 4.4 | 0.0119 |
| <i>WDR44</i> | X | 8169519 | 208.8 ± 38.1 | 195.2 ± 41.1 | -13.6 | 0.0034 | 0.049 | cg13674559 | TSS1500 | Island | 17.2 ± 12.3 | 20.5 ± 12.2 | 3.3 | 0.0037 |
| <i>VPS13D</i> | 1 | 7897890 | 181.6 ± 28.9 | 164.4 ± 24.3 | -17.2 | 0.0034 | 0.049 | cg10204259 | Body | Open sea | 65.1 ± 6.7 | 68.4 ± 6.0 | 3.4 | 0.0145 |
| <i>VPS13D</i> | 1 | 7897890 | 181.6 ± 28.9 | 164.4 ± 24.3 | -17.2 | 0.0034 | 0.049 | cg10798815 | 3'UTR | Open sea | 70.3 ± 6.2 | 74.9 ± 4.8 | 4.6 | 0.0152 |
| <i>VPS41</i> | 7 | 8139165 | 1,600.3 ± 234.3 | 1,469.6 ± 270.6 | -130.8 | 0.0012 | 0.027 | cg04957903 | Body | Open sea | 70.5 ± 5.0 | 74.4 ± 6.1 | 4.0 | 0.0036 |
| <i>XRCC5</i> | 2 | 8048146 | 2,279.6 ± 144.3 | 2,112.4 ± 182.8 | -167.2 | 0.0017 | 0.033 | cg07011981 | Body | Open sea | 73.0 ± 5.0 | 76.4 ± 2.7 | 3.4 | 0.0095 |
| <i>ZBTB38</i> | 3 | 8083090 | 1,315.7 ± 219.0 | 1,174.0 ± 232.6 | -141.7 | 0.0012 | 0.027 | cg21612382 | 5'UTR | Open sea | 71.7 ± 4.8 | 75.3 ± 3.6 | 3.6 | 0.0184 |
| <i>ZC3HAV1</i> | 7 | 8143279 | 442.1 ± 55.0 | 411.4 ± 58.0 | -30.7 | 0.0012 | 0.027 | cg23424043 | TSS1500 | S Shore | 61.7 ± 4.7 | 65.3 ± 5.6 | 3.6 | 0.0031 |
| <i>ZC3HAV1</i> | 7 | 8143279 | 442.1 ± 55.0 | 411.4 ± 58.0 | -30.7 | 0.0012 | 0.027 | cg08222662 | TSS1500 | S Shore | 12.8 ± 7.7 | 16.9 ± 8.1 | 4.1 | 0.0244 |
| <i>ZC3HAV1</i> | 7 | 8143279 | 442.1 ± 55.0 | 411.4 ± 58.0 | -30.7 | 0.0012 | 0.027 | cg00303210 | Body; 3'UTR | Open sea | 50.0 ± 8.4 | 54.4 ± 11.4 | 4.4 | 0.0172 |
| <i>ZNF395</i> | 8 | 8149986 | 278.1 ± 80.6 | 387.2 ± 146.9 | 109.1 | 0.0007 | 0.020 | cg21330896 | 3'UTR | Open sea | 55.4 ± 11.8 | 59.3 ± 10.3 | 4.0 | 0.0231 |
| <i>ZNF436</i> | 1 | 7913582 | 157.2 ± 23.1 | 131.9 ± 17.8 | -25.4 | 0.0002 | 0.013 | cg07106501 | Body | N Shelf | 54.8 ± 5.1 | 57.9 ± 3.9 | 3.0 | 0.0209 |

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|--------|----|---------|-------------|-------------|-------|--------|-------|------------|-------|----------|------------|------------|-----|--------|
| ZNF552 | 19 | 8039687 | 62.7 ± 10.5 | 51.6 ± 10.5 | -11.1 | 0.0007 | 0.020 | cg14727106 | 3'UTR | Open sea | 68.4 ± 3.9 | 71.9 ± 3.9 | 3.5 | 0.0075 |
|--------|----|---------|-------------|-------------|-------|--------|-------|------------|-------|----------|------------|------------|-----|--------|