

S3 Table. Outlier gene list

1) Lung cancer

| Gene | Outlier types | Protein class from Protein Atlas database | CCLE | | TCGA | | DEGs analysis | | | |
|---------------|--|--|---------------------------|-----------|---------------------------|-----------|----------------------------------|-------|-------------|---------------------------|
| | | | OL \geq 7, mZ \geq 10 | | OL \geq 7, mZ \geq 10 | | p-value <0.05, FDR <0.01, FC > 2 | | | |
| | | | No. | Frequency | No. | Frequency | DEGs | logFC | p_Value | FDR(False Discovery Rate) |
| <i>NRK</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 10 | 0.15 | 21 | 0.04 | Upregulated DEGs | 4.03 | 3.62E-23 | 2.28E-22 |
| <i>GUCY2C</i> | 1. Kinase, Predicted membrane proteins | Disease related genes, Enzymes, FDA approved drug targets, Predicted membrane proteins | 3 | 0.04 | 27 | 0.05 | Upregulated DEGs | 4.33 | 2.01E-16 | 7.88E-16 |
| <i>RET</i> | 1. Kinase, Predicted membrane proteins | Cancer-related genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.06 | 59 | 0.11 | Upregulated DEGs | 3.34 | 6.71E-15 | 2.35E-14 |
| <i>ERN2</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 3.22 | 2.41E-12 | 7.02E-12 |
| <i>EPHB1</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 20 | 0.04 | Upregulated DEGs | 1.97 | 8.13E-12 | 2.29E-11 |
| <i>EPHA7</i> | 1. Kinase, Predicted membrane proteins | Cancer-related genes, Enzymes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 36 | 0.07 | Upregulated DEGs | 1.46 | 0.0000942 | 0.00015298 |
| <i>EPHB6</i> | 1. Kinase, Predicted | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 14 | 0.03 | Non-differentially | -0.73 | 0.000526702 | 0.000799203 |

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|---------------|--|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | | | | | | expressed genes | | | |
| <i>ACVR1C</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 10 | 0.02 | Non-differentially expressed genes | 0.72 | 0.000565916 | 0.000857132 |
| <i>SGK2</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 7 | 0.10 | 8 | 0.02 | Upregulated DEGs | 3.44 | 3.66E-26 | 2.79E-25 |
| <i>CDK4</i> | 2. Kinase | Cancer-related genes, Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.19 | 4.2E-23 | 2.63E-22 |
| <i>MYO3B</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 25 | 0.05 | Upregulated DEGs | 4.19 | 9.7E-23 | 5.92E-22 |
| <i>BRDT</i> | 2. Kinase | Predicted intracellular proteins | 6 | 0.09 | 29 | 0.06 | Upregulated DEGs | 7.10 | 8.15E-16 | 3.05E-15 |
| <i>STK32B</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 24 | 0.05 | Upregulated DEGs | 1.27 | 0.00000354 | 0.00000646 |
| <i>WNK4</i> | 2. Kinase | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 19 | 0.04 | Upregulated DEGs | 1.18 | 0.000164793 | 0.00026246 |
| <i>KSR2</i> | 2. Kinase | Enzymes, Plasma proteins, Predicted intracellular proteins, RAS pathway related proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | 0.68 | 0.002282875 | 0.003273527 |
| <i>CDKL2</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | -0.16 | 0.419899003 | 0.454837141 |
| <i>KISS1R</i> | 3. Predicted membrane proteins | Disease related genes, G-protein coupled receptors, Potential drug targets, Predicted membrane proteins, Transporters | 7 | 0.10 | 15 | 0.03 | Upregulated DEGs | 6.58 | 1.37E-41 | 2.59E-40 |
| <i>GCNT3</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 2 | 0.03 | 7 | 0.01 | Upregulated DEGs | 5.41 | 1.96E-41 | 3.66E-40 |
| <i>ATP10B</i> | 3. Predicted | Enzymes, Predicted intracellular | 3 | 0.04 | 17 | 0.03 | Upregulated | 5.83 | 3.14E-41 | 5.82E-40 |

| | membrane proteins | proteins, Predicted membrane proteins | | | | | DEGs | | | |
|----------------|--------------------------------|--|----|------|----|------|------------------|------|----------|----------|
| <i>TRPM8</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins, Voltage-gated ion channels | 3 | 0.04 | 28 | 0.05 | Upregulated DEGs | 7.52 | 4.99E-33 | 5.8E-32 |
| <i>TNFSF11</i> | 3. Predicted membrane proteins | Cancer-related genes, CD markers, Disease related genes, FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.06 | 13 | 0.03 | Upregulated DEGs | 4.33 | 3.16E-30 | 3.13E-29 |
| <i>LYPD3</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 5 | 0.07 | 20 | 0.04 | Upregulated DEGs | 3.68 | 1.71E-28 | 1.53E-27 |
| <i>CA9</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins, Predicted secreted proteins | 10 | 0.15 | 16 | 0.03 | Upregulated DEGs | 5.95 | 4.86E-28 | 4.19E-27 |
| <i>DUSP13</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.07 | 33 | 0.06 | Upregulated DEGs | 6.78 | 7.99E-28 | 6.82E-27 |
| <i>DLL3</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 37 | 0.07 | Upregulated DEGs | 7.67 | 1.62E-27 | 1.35E-26 |
| <i>ECEL1</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 34 | 0.07 | Upregulated DEGs | 6.01 | 1.53E-26 | 1.19E-25 |
| <i>RNFT2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 2.45 | 1.9E-26 | 1.47E-25 |
| <i>IL20RB</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 43 | 0.08 | Upregulated DEGs | 4.25 | 7.1E-25 | 4.98E-24 |
| <i>GJB6</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 9 | 0.13 | 31 | 0.06 | Upregulated DEGs | 5.43 | 1.36E-24 | 9.35E-24 |

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|-----------------|--------------------------------|---|----|------|----|------|--------------------|-------|----------|----------|
| <i>APCDD1L</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.07 | 10 | 0.02 | Upregulated DEGs | 4.15 | 1.52E-24 | 1.04E-23 |
| <i>NEGR1</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 7 | 0.10 | 6 | 0.01 | Downregulated DEGs | -1.64 | 1.73E-24 | 1.18E-23 |
| <i>ABCA4</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Potential drug targets, Predicted membrane proteins, Transporters | 6 | 0.09 | 14 | 0.03 | Upregulated DEGs | 4.44 | 5.52E-24 | 3.66E-23 |
| <i>CDH17</i> | 3. Predicted membrane proteins | Cancer-related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 12 | 0.18 | 63 | 0.12 | Upregulated DEGs | 5.99 | 1.67E-23 | 1.07E-22 |
| <i>ALDH3B2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 7 | 0.10 | 11 | 0.02 | Upregulated DEGs | 2.79 | 2.41E-23 | 1.53E-22 |
| <i>MUC13</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 11 | 0.16 | 26 | 0.05 | Upregulated DEGs | 6.18 | 4.14E-23 | 2.59E-22 |
| <i>RNF183</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 6 | 0.01 | Upregulated DEGs | 4.30 | 5.72E-23 | 3.55E-22 |
| <i>COL17A1</i> | 3. Predicted membrane proteins | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.09 | 19 | 0.04 | Upregulated DEGs | 4.40 | 8.59E-23 | 5.26E-22 |
| <i>CATSPERB</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transporters | 7 | 0.10 | 12 | 0.02 | Upregulated DEGs | 3.60 | 2.28E-22 | 1.36E-21 |
| <i>C9orf84</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 7 | 0.10 | 22 | 0.04 | Upregulated DEGs | 3.81 | 9.1E-22 | 5.17E-21 |
| <i>FUT9</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.10 | 21 | 0.04 | Upregulated DEGs | 6.50 | 1.01E-21 | 5.72E-21 |
| <i>CEACAM7</i> | 3. Predicted membrane | Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 34 | 0.07 | Upregulated DEGs | 5.78 | 1.78E-21 | 9.96E-21 |

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|----------------|--------------------------------|--|----|------|----|------|--------------------|-------|----------|----------|
| | proteins | | | | | | | | | |
| <i>NPC1L1</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins | 2 | 0.03 | 56 | 0.11 | Upregulated DEGs | 4.94 | 3.68E-21 | 2.01E-20 |
| <i>LY6D</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 7 | 0.10 | 34 | 0.07 | Upregulated DEGs | 6.03 | 8.2E-21 | 4.36E-20 |
| <i>SLC15A1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.06 | 19 | 0.04 | Upregulated DEGs | 4.60 | 3.05E-20 | 1.56E-19 |
| <i>SLCO1B3</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 49 | 0.09 | Upregulated DEGs | 7.48 | 3.13E-20 | 1.6E-19 |
| <i>ABCB4</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins, Transporters | 2 | 0.03 | 19 | 0.04 | Upregulated DEGs | 2.55 | 8.28E-20 | 4.1E-19 |
| <i>DIO2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 6 | 0.09 | 7 | 0.01 | Upregulated DEGs | 2.39 | 1.46E-19 | 7.06E-19 |
| <i>JAM3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 11 | 0.16 | 7 | 0.01 | Downregulated DEGs | -1.09 | 2.18E-19 | 1.04E-18 |
| <i>TSPAN7</i> | 3. Predicted membrane proteins | CD markers, Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 8 | 0.12 | 9 | 0.02 | Downregulated DEGs | -1.66 | 2.36E-19 | 1.13E-18 |
| <i>CLDN6</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 62 | 0.12 | Upregulated DEGs | 6.17 | 2.62E-19 | 1.25E-18 |
| <i>SUSD2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 8 | 0.02 | Downregulated DEGs | -1.87 | 9.25E-19 | 4.25E-18 |
| <i>SLC5A3</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.06 | 7 | 0.01 | Upregulated DEGs | 1.30 | 3.04E-18 | 1.35E-17 |

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|----------------|--------------------------------|---|----|------|----|------|------------------|------|----------|----------|
| <i>TM4SF4</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 10 | 0.15 | 52 | 0.10 | Upregulated DEGs | 6.17 | 4.5E-18 | 1.98E-17 |
| <i>PTPRN</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 25 | 0.05 | Upregulated DEGs | 5.09 | 3.51E-17 | 1.46E-16 |
| <i>KCNE4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 9 | 0.13 | 20 | 0.04 | Upregulated DEGs | 2.43 | 1.22E-16 | 4.86E-16 |
| <i>AMN</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 10 | 0.02 | Upregulated DEGs | 2.63 | 3.21E-16 | 1.24E-15 |
| <i>PLD5</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 6 | 0.01 | Upregulated DEGs | 3.27 | 8.19E-16 | 3.06E-15 |
| <i>SLC39A5</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins, Transporters | 3 | 0.04 | 60 | 0.12 | Upregulated DEGs | 5.30 | 5.65E-15 | 1.99E-14 |
| <i>UGT2B15</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 3 | 0.04 | 52 | 0.10 | Upregulated DEGs | 4.99 | 5.8E-15 | 2.04E-14 |
| <i>ATP1A3</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted membrane proteins, Transporters | 3 | 0.04 | 22 | 0.04 | Upregulated DEGs | 2.63 | 1.13E-14 | 3.89E-14 |
| <i>VSIG10L</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 17 | 0.03 | Upregulated DEGs | 2.12 | 1.2E-14 | 4.15E-14 |
| <i>CHRNA9</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 9 | 0.13 | 69 | 0.13 | Upregulated DEGs | 5.26 | 2.23E-14 | 7.55E-14 |
| <i>VTCN1</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 7 | 0.10 | 19 | 0.04 | Upregulated DEGs | 2.95 | 4.41E-14 | 1.46E-13 |
| <i>VSIG1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 6 | 0.09 | 42 | 0.08 | Upregulated DEGs | 3.64 | 6.58E-14 | 2.15E-13 |
| <i>SLCIA7</i> | 3. Predicted membrane | Predicted membrane proteins, Transporters | 3 | 0.04 | 37 | 0.07 | Upregulated DEGs | 3.40 | 7.95E-14 | 2.58E-13 |

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|-----------------|--------------------------------|--|----|------|----|------|--------------------|-------|----------|----------|
| | proteins | | | | | | | | | |
| <i>NTSR1</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 3 | 0.04 | 42 | 0.08 | Upregulated DEGs | 4.85 | 8.06E-14 | 2.61E-13 |
| <i>GABRA3</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins | 2 | 0.03 | 43 | 0.08 | Upregulated DEGs | 6.27 | 8.27E-14 | 2.68E-13 |
| <i>JPH3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 4 | 0.06 | 50 | 0.10 | Upregulated DEGs | 3.11 | 9.37E-14 | 3.03E-13 |
| <i>ELOVL2</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 2 | 0.03 | 16 | 0.03 | Upregulated DEGs | 1.98 | 2.57E-13 | 8.04E-13 |
| <i>UGT1A6</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 10 | 0.15 | 70 | 0.14 | Upregulated DEGs | 4.70 | 3.66E-13 | 1.13E-12 |
| <i>CNTNAP2</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 7 | 0.10 | 20 | 0.04 | Upregulated DEGs | 3.11 | 4.73E-13 | 1.45E-12 |
| <i>C11orf41</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 24 | 0.05 | Upregulated DEGs | 2.29 | 5.84E-13 | 1.77E-12 |
| <i>AQP1</i> | 3. Predicted membrane proteins | Blood group antigen proteins, Predicted membrane proteins, Transporters | 4 | 0.06 | 9 | 0.02 | Downregulated DEGs | -1.38 | 3.85E-12 | 1.11E-11 |
| <i>ABCC9</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 3 | 0.04 | 6 | 0.01 | Downregulated DEGs | -1.01 | 4.1E-12 | 1.18E-11 |
| <i>TMEM198</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 8 | 0.02 | Upregulated DEGs | 1.16 | 4.61E-12 | 1.32E-11 |
| <i>CHODL</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 8 | 0.02 | Upregulated DEGs | 2.14 | 4.74E-12 | 1.36E-11 |
| <i>CLDN2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 9 | 0.13 | 42 | 0.08 | Upregulated DEGs | 3.28 | 5.1E-12 | 1.45E-11 |

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|-----------------|--------------------------------|---|---|------|----|------|------------------|------|----------|----------|
| <i>DPP10</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.09 | 12 | 0.02 | Upregulated DEGs | 3.00 | 6.19E-12 | 1.76E-11 |
| <i>IL12RB2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 16 | 0.03 | Upregulated DEGs | 1.92 | 9.29E-12 | 2.6E-11 |
| <i>GABRP</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 39 | 0.08 | Upregulated DEGs | 3.42 | 1.88E-11 | 5.15E-11 |
| <i>ATP8B3</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 5 | 0.07 | 16 | 0.03 | Upregulated DEGs | 1.67 | 1.88E-11 | 5.17E-11 |
| <i>DSG3</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 6 | 0.09 | 44 | 0.09 | Upregulated DEGs | 5.27 | 2.04E-11 | 5.58E-11 |
| <i>ATP6V0A4</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 6 | 0.09 | 7 | 0.01 | Upregulated DEGs | 2.44 | 3.66E-11 | 9.83E-11 |
| <i>ACE2</i> | 3. Predicted membrane proteins | Enzymes, FDA approved drug targets, Predicted membrane proteins | 2 | 0.03 | 12 | 0.02 | Upregulated DEGs | 1.96 | 4.65E-11 | 1.24E-10 |
| <i>HEPACAM2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 58 | 0.11 | Upregulated DEGs | 4.25 | 6.5E-11 | 1.71E-10 |
| <i>SCN3A</i> | 3. Predicted membrane proteins | FDA approved drug targets, Plasma proteins, Predicted membrane proteins, Voltage-gated ion channels | 5 | 0.07 | 43 | 0.08 | Upregulated DEGs | 3.02 | 1.22E-10 | 3.14E-10 |
| <i>GABBR2</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins, Transporters | 5 | 0.07 | 30 | 0.06 | Upregulated DEGs | 2.56 | 1.53E-10 | 3.93E-10 |
| <i>TSPAN8</i> | 3. Predicted membrane proteins | Cancer-related genes, Predicted membrane proteins | 3 | 0.04 | 13 | 0.03 | Upregulated DEGs | 2.21 | 2.78E-10 | 7E-10 |
| <i>JAKMIP1</i> | 3. Predicted membrane | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 6 | 0.01 | Upregulated DEGs | 1.49 | 3.98E-10 | 9.93E-10 |

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|----------------|--------------------------------|--|---|------|----|------|--------------------|-------|----------|----------|
| | proteins | | | | | | | | | |
| <i>SV2A</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.53 | 4.07E-10 | 1.01E-09 |
| <i>GJB5</i> | 3. Predicted membrane proteins | Cancer-related genes, Predicted membrane proteins | 8 | 0.12 | 12 | 0.02 | Upregulated DEGs | 2.49 | 6.2E-10 | 1.52E-09 |
| <i>SLC38A4</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 27 | 0.05 | Upregulated DEGs | 2.12 | 7.25E-10 | 1.77E-09 |
| <i>CNIH3</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 6 | 0.09 | 8 | 0.02 | Upregulated DEGs | 1.40 | 9.34E-10 | 2.26E-09 |
| <i>FURIN</i> | 3. Predicted membrane proteins | Enzymes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 16 | 0.03 | Upregulated DEGs | 1.16 | 1.62E-09 | 3.84E-09 |
| <i>MAL</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 8 | 0.12 | 7 | 0.01 | Downregulated DEGs | -1.08 | 1.86E-09 | 4.4E-09 |
| <i>TMEM27</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 18 | 0.03 | Upregulated DEGs | 1.73 | 2.54E-09 | 5.95E-09 |
| <i>KCNH2</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Plasma proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 4 | 0.06 | 9 | 0.02 | Upregulated DEGs | 1.79 | 2.61E-09 | 6.1E-09 |
| <i>SLC6A15</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transporters | 3 | 0.04 | 63 | 0.12 | Upregulated DEGs | 4.14 | 2.69E-09 | 6.28E-09 |
| <i>PTPRZ1</i> | 3. Predicted membrane proteins | Enzymes, Plasma proteins, Predicted membrane proteins | 5 | 0.07 | 27 | 0.05 | Upregulated DEGs | 2.37 | 3.46E-09 | 8.01E-09 |
| <i>FAT2</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 2 | 0.03 | 30 | 0.06 | Upregulated DEGs | 2.21 | 3.65E-09 | 8.45E-09 |
| <i>SDK1</i> | 3. Predicted membrane | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 6 | 0.01 | Upregulated DEGs | 1.32 | 3.83E-09 | 8.84E-09 |

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|-----------------|--------------------------------|--|---|------|----|------|--------------------|-------|-------------|-------------|
| | proteins | | | | | | | | | |
| <i>CLDN11</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 11 | 0.02 | Downregulated DEGs | -1.11 | 6.95E-09 | 1.57E-08 |
| <i>LICAM</i> | 3. Predicted membrane proteins | CD markers, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 30 | 0.06 | Upregulated DEGs | 2.27 | 8.12E-09 | 1.82E-08 |
| <i>KCNF1</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 2 | 0.03 | 23 | 0.04 | Upregulated DEGs | 1.85 | 1.01E-08 | 2.26E-08 |
| <i>ITGA10</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 4 | 0.06 | 6 | 0.01 | Downregulated DEGs | -1.01 | 1.09E-08 | 2.43E-08 |
| <i>TMTC1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 10 | 0.02 | Downregulated DEGs | -1.04 | 1.68E-08 | 3.67E-08 |
| <i>CA12</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted membrane proteins | 4 | 0.06 | 16 | 0.03 | Upregulated DEGs | 1.74 | 2.24E-08 | 4.87E-08 |
| <i>CTCFL</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transcription factors | 2 | 0.03 | 17 | 0.03 | Upregulated DEGs | 1.60 | 2.34E-08 | 5.07E-08 |
| <i>KIAA1644</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.10 | 11 | 0.02 | Upregulated DEGs | 1.46 | 6.08E-08 | 0.000000128 |
| <i>SLCO4C1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 6 | 0.01 | Downregulated DEGs | -1.08 | 7.17E-08 | 0.00000015 |
| <i>LRRTM1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 4 | 0.06 | 38 | 0.07 | Upregulated DEGs | 3.27 | 8.48E-08 | 0.000000177 |
| <i>ADRA2A</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 3 | 0.04 | 14 | 0.03 | Upregulated DEGs | 1.55 | 8.57E-08 | 0.000000178 |
| <i>FZD10</i> | 3. Predicted membrane | CD markers, G-protein coupled receptors, Predicted intracellular | 9 | 0.13 | 60 | 0.12 | Upregulated DEGs | 2.06 | 0.000000228 | 0.000000459 |

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|----------------|--------------------------------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | proteins | proteins, Predicted membrane proteins | | | | | | | | |
| <i>CFTR</i> | 3. Predicted membrane proteins | Cancer-related genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins, Transporters | 2 | 0.03 | 6 | 0.01 | Downregulated DEGs | -1.19 | 0.000000359 | 0.00000071 |
| <i>F2RL2</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 6 | 0.09 | 16 | 0.03 | Upregulated DEGs | 1.41 | 0.000000426 | 0.000000838 |
| <i>ODZ3</i> | 3. Predicted membrane proteins | Cytoskeleton related proteins, Predicted membrane proteins | 3 | 0.04 | 6 | 0.01 | Upregulated DEGs | 1.16 | 0.000000752 | 0.00000145 |
| <i>CECR6</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | 0.92 | 0.0000008 | 0.00000154 |
| <i>SHISA3</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 6 | 0.09 | 53 | 0.10 | Upregulated DEGs | 2.10 | 0.00000106 | 0.00000202 |
| <i>LPHN3</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 4 | 0.06 | 12 | 0.02 | Downregulated DEGs | -1.04 | 0.00000232 | 0.00000429 |
| <i>DLK2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 15 | 0.03 | Upregulated DEGs | 1.26 | 0.00000573 | 0.0000103 |
| <i>CCR10</i> | 3. Predicted membrane proteins | Cancer-related genes, G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 3 | 0.04 | 21 | 0.04 | Upregulated DEGs | 1.07 | 0.00000593 | 0.0000106 |
| <i>VNN2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 7 | 0.01 | Non-differentially expressed genes | -0.78 | 0.00000606 | 0.0000109 |
| <i>HSD17B2</i> | 3. Predicted membrane proteins | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 8 | 0.12 | 27 | 0.05 | Upregulated DEGs | 1.78 | 0.00000667 | 0.0000119 |

| | | | | | | | | | | |
|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>DIO1</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 32 | 0.06 | Upregulated DEGs | 1.68 | 0.00000891 | 0.0000157 |
| <i>SCN2A</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 4 | 0.06 | 35 | 0.07 | Upregulated DEGs | 1.71 | 0.0000131 | 0.0000228 |
| <i>TMED6</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 25 | 0.05 | Upregulated DEGs | 1.31 | 0.0000788 | 0.000128754 |
| <i>RYR2</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Potential drug targets, Predicted membrane proteins, Transporters | 8 | 0.12 | 7 | 0.01 | Non-differentially expressed genes | -0.81 | 0.0000788 | 0.000128754 |
| <i>SLC7A2</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.12 | 0.0000965 | 0.00015642 |
| <i>GRIN2A</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Plasma proteins, Predicted membrane proteins, RAS pathway related proteins | 3 | 0.04 | 49 | 0.09 | Upregulated DEGs | 1.54 | 0.000146867 | 0.000234814 |
| <i>ANO3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 22 | 0.04 | Upregulated DEGs | 1.18 | 0.000214295 | 0.000338082 |
| <i>GPR77</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 2 | 0.03 | 8 | 0.02 | Non-differentially expressed genes | 0.71 | 0.00055921 | 0.000847148 |
| <i>PDE3A</i> | 3. Predicted membrane proteins | Enzymes, FDA approved drug targets, Plasma proteins, Predicted membrane proteins | 4 | 0.06 | 18 | 0.03 | Non-differentially expressed genes | 0.93 | 0.000628503 | 0.000946728 |
| <i>PCDH19</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 6 | 0.09 | 15 | 0.03 | Non-differentially expressed genes | 0.87 | 0.001119373 | 0.001647641 |
| <i>HRASLS2</i> | 3. Predicted | Predicted membrane proteins | 2 | 0.03 | 18 | 0.03 | Non- | 0.97 | 0.001814465 | 0.002626635 |

| | | | | | | | | | | |
|-----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | | | | | | differentially expressed genes | | | |
| <i>NRCAM</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.06 | 22 | 0.04 | Non-differentially expressed genes | 0.80 | 0.002799164 | 0.003980516 |
| <i>PCDHB6</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.10 | 15 | 0.03 | Non-differentially expressed genes | 0.63 | 0.003348503 | 0.004726944 |
| <i>SLITRK6</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 3 | 0.04 | 13 | 0.03 | Non-differentially expressed genes | 0.89 | 0.003746178 | 0.005257428 |
| <i>DLL1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 7 | 0.01 | Non-differentially expressed genes | -0.48 | 0.005351442 | 0.007380907 |
| <i>HLA-DQB2</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 8 | 0.02 | Non-differentially expressed genes | 0.72 | 0.005821697 | 0.00799765 |
| <i>RCAN2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.07 | 7 | 0.01 | Non-differentially expressed genes | -0.45 | 0.006348075 | 0.008689511 |
| <i>TMEM169</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 8 | 0.02 | Non-differentially expressed genes | 0.50 | 0.006477423 | 0.008858426 |
| <i>DHRS9</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 6 | 0.09 | 22 | 0.04 | Non-differentially expressed genes | 0.67 | 0.008286704 | 0.0112062 |
| <i>SMPD3</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 14 | 0.03 | Non-differentially expressed | 0.58 | 0.008520802 | 0.011509188 |

| | | | | | | | genes | | | |
|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>APOL1</i> | 3. Predicted membrane proteins | Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | 0.41 | 0.010156629 | 0.013597867 |
| <i>SYP</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 26 | 0.05 | Non-differentially expressed genes | -0.55 | 0.011526733 | 0.015359008 |
| <i>SLC2A12</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 8 | 0.02 | Non-differentially expressed genes | -0.43 | 0.013083139 | 0.017312056 |
| <i>RAET1E</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 7 | 0.01 | Non-differentially expressed genes | 0.63 | 0.014552802 | 0.019156344 |
| <i>JAG1</i> | 3. Predicted membrane proteins | CD markers, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | -0.33 | 0.016590756 | 0.021712314 |
| <i>TMPRSS3</i> | 3. Predicted membrane proteins | Cancer-related genes, Disease related genes, Enzymes, Potential drug targets, Predicted membrane proteins | 3 | 0.04 | 13 | 0.03 | Non-differentially expressed genes | 0.63 | 0.017916999 | 0.023386317 |
| <i>TRPC6</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Potential drug targets, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 7 | 0.10 | 6 | 0.01 | Non-differentially expressed genes | -0.45 | 0.020658754 | 0.0267796 |
| <i>CDH6</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 6 | 0.09 | 12 | 0.02 | Non-differentially expressed genes | -0.46 | 0.021631552 | 0.027999192 |
| <i>SUSD5</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 6 | 0.09 | 8 | 0.02 | Non-differentially expressed | 0.46 | 0.028630332 | 0.036549934 |

| | | | | | | | | | | |
|----------------|--------------------------------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | genes | | | |
| <i>FFAR2</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 3 | 0.04 | 25 | 0.05 | Non-differentially expressed genes | 0.60 | 0.029948708 | 0.038151237 |
| <i>HLA-G</i> | 3. Predicted membrane proteins | Cancer-related genes, Predicted membrane proteins | 2 | 0.03 | 10 | 0.02 | Non-differentially expressed genes | 0.53 | 0.036784936 | 0.046364088 |
| <i>ABCA13</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 12 | 0.02 | Non-differentially expressed genes | 0.62 | 0.038740797 | 0.048713838 |
| <i>LGR6</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | 0.52 | 0.043477549 | 0.054371579 |
| <i>TMEM35</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 25 | 0.05 | Non-differentially expressed genes | -0.47 | 0.049121672 | 0.061050577 |
| <i>FAM198B</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 6 | 0.01 | Non-differentially expressed genes | 0.30 | 0.06005432 | 0.073703254 |
| <i>B3GALT2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.10 | 18 | 0.03 | Non-differentially expressed genes | -0.43 | 0.074505521 | 0.090469689 |
| <i>LRP2</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 5 | 0.07 | 7 | 0.01 | Non-differentially expressed genes | -0.48 | 0.082401196 | 0.099457088 |
| <i>EDAR</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins | 6 | 0.09 | 20 | 0.04 | Non-differentially expressed genes | 0.56 | 0.08953366 | 0.107482251 |
| <i>RNF150</i> | 3. Predicted | Predicted membrane proteins, | 3 | 0.04 | 11 | 0.02 | Non- | 0.36 | 0.090562975 | 0.108621598 |

| | | | | | | | | | | |
|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | Predicted secreted proteins | | | | | differentially expressed genes | | | |
| <i>CYP3A5</i> | 3. Predicted membrane proteins | Cancer-related genes, Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 29 | 0.06 | Non-differentially expressed genes | 0.53 | 0.106482145 | 0.126351573 |
| <i>FAM155A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 7 | 0.01 | Non-differentially expressed genes | -0.28 | 0.172781143 | 0.198966177 |
| <i>CHRM3</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 3 | 0.04 | 15 | 0.03 | Non-differentially expressed genes | -0.33 | 0.193629101 | 0.221585847 |
| <i>SLC7A8</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 7 | 0.01 | Non-differentially expressed genes | -0.22 | 0.196878406 | 0.224993102 |
| <i>ST6GAL2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.09 | 10 | 0.02 | Non-differentially expressed genes | -0.28 | 0.254726818 | 0.286507552 |
| <i>GPR64</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 5 | 0.07 | 10 | 0.02 | Non-differentially expressed genes | 0.26 | 0.26297665 | 0.29536284 |
| <i>SLC26A9</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 8 | 0.02 | Non-differentially expressed genes | 0.30 | 0.279009975 | 0.312076272 |
| <i>PRUNE2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.07 | 6 | 0.01 | Non-differentially expressed genes | -0.19 | 0.340784815 | 0.375472726 |
| <i>TSPAN31</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 10 | 0.02 | Non-differentially expressed | 0.09 | 0.400868119 | 0.435691929 |

| | | | | | | | genes | | | |
|----------------|--------------------------------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>PTGER3</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 4 | 0.06 | 18 | 0.03 | Non-differentially expressed genes | -0.19 | 0.432361903 | 0.467554881 |
| <i>PCDHB3</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 10 | 0.15 | 18 | 0.03 | Non-differentially expressed genes | -0.12 | 0.491252155 | 0.526877311 |
| <i>TMEM130</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 12 | 0.02 | Non-differentially expressed genes | 0.16 | 0.527681304 | 0.562827305 |
| <i>SHISA2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 8 | 0.12 | 18 | 0.03 | Non-differentially expressed genes | 0.16 | 0.556268722 | 0.590275032 |
| <i>SLC10A4</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 7 | 0.10 | 17 | 0.03 | Non-differentially expressed genes | 0.15 | 0.576899801 | 0.610644544 |
| <i>GPR98</i> | 3. Predicted membrane proteins | Disease related genes, G-protein coupled receptors, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins, Transporters | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | 0.13 | 0.577619783 | 0.611319743 |
| <i>TMEM71</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 6 | 0.01 | Non-differentially expressed genes | 0.10 | 0.582262274 | 0.615795487 |
| <i>PTPRN2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.09 | 6 | 0.01 | Non-differentially expressed genes | -0.11 | 0.602404246 | 0.635023106 |
| <i>SLITRK4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 21 | 0.04 | Non-differentially expressed | 0.11 | 0.669472834 | 0.69963223 |

| | | | | | | | genes | | | |
|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>HAS3</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 3 | 0.04 | 10 | 0.02 | Non-differentially expressed genes | 0.08 | 0.738375195 | 0.764450593 |
| <i>CXCR7</i> | 3. Predicted membrane proteins | Cancer-related genes, G-protein coupled receptors, Predicted membrane proteins | 7 | 0.10 | 10 | 0.02 | Non-differentially expressed genes | -0.06 | 0.744954673 | 0.770566047 |
| <i>SLC5A1</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | 0.11 | 0.750029507 | 0.775276891 |
| <i>KCNJ12</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Voltage-gated ion channels | 3 | 0.04 | 21 | 0.04 | Non-differentially expressed genes | -0.06 | 0.784342307 | 0.807047808 |
| <i>LRP4</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 11 | 0.02 | Non-differentially expressed genes | -0.01 | 0.980833452 | 0.983872338 |
| <i>SLCO4A1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | 0.00 | 0.995923234 | 0.996391558 |
| <i>CACNA1A</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 2 | 0.03 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CD70</i> | 3. Predicted membrane proteins | Cancer-related genes, CD markers, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CNTNAP4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 43 | 0.08 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|---------------|--------------------------------|--|---|------|----|------|------|------|------|------|
| <i>DRD5</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 2 | 0.03 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>DSC1</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 2 | 0.03 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>ELOVL3</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 2 | 0.03 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>GRM4</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>HTR1F</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 2 | 0.03 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNB2</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 25 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNC1</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNH7</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 21 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNH8</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNK12</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 23 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNV1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Voltage-gated ion channels | 2 | 0.03 | 29 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>LRFN2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>MMP16</i> | 3. Predicted | Cancer-related genes, Enzymes, | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |

| | membrane proteins | FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins | | | | | | | | | |
|------------------|--------------------------------|--|---|------|----|------|------|------|------|------|--|
| <i>NKAIN1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 24 | 0.05 | #N/A | #N/A | #N/A | #N/A | |
| <i>RNF186</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A | |
| <i>THSD7B</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A | |
| <i>TMEM145</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A | |
| <i>TMEM74</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A | |
| <i>TMPRSS11D</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 43 | 0.08 | #N/A | #N/A | #N/A | #N/A | |
| <i>UPK1A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 23 | 0.04 | #N/A | #N/A | #N/A | #N/A | |
| <i>XKR4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A | |
| <i>CADM2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A | |
| <i>ILDR2</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 3 | 0.04 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A | |
| <i>KCNK2</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Voltage-gated ion channels | 3 | 0.04 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A | |
| <i>NKAIN4</i> | 3. Predicted membrane | Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.04 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A | |

| | | | | | | | | | | |
|-----------------|--------------------------------|---|---|------|----|------|------|------|------|------|
| | proteins | | | | | | | | | |
| <i>SLC16A8</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Transporters | 3 | 0.04 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC25A18</i> | 3. Predicted membrane proteins | Mitochondrial proteins, Plasma proteins, Predicted membrane proteins, Transporters | 3 | 0.04 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC3A1</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins, Transporters | 3 | 0.04 | 25 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>TRIL</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>TRPA1</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 3 | 0.04 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>TTYH1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 3 | 0.04 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>ZPLD1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.04 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CALHM3</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.06 | 22 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>GABRR1</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins | 4 | 0.06 | 57 | 0.11 | #N/A | #N/A | #N/A | #N/A |
| <i>HRK</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>HYAL4</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|----------------|--------------------------------|---|---|------|----|------|------|------|------|------|
| <i>NKAIN2</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 4 | 0.06 | 60 | 0.12 | #N/A | #N/A | #N/A | #N/A |
| <i>NLGN1</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.06 | 13 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>OR51E2</i> | 3. Predicted membrane proteins | Cancer-related genes, G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 4 | 0.06 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>RPRML</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>UNC5A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 13 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>UPK2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.06 | 23 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CDH12</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 5 | 0.07 | 30 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>DMRT2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transcription factors | 5 | 0.07 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC47A2</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 5 | 0.07 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CLRN3</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 6 | 0.09 | 29 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>IGSF11</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 6 | 0.09 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KIRREL3</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins | 6 | 0.09 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>KLRC3</i> | 3. Predicted | Predicted membrane proteins | 6 | 0.09 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |

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|----------------|--------------------------------|---|----|------|----|------|------------------|------|----------|----------|
| | membrane proteins | | | | | | | | | |
| <i>NETO1</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins, Transporters | 6 | 0.09 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>PTH2R</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 6 | 0.09 | 31 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>SYT14</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.09 | 43 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>CDH4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.10 | 39 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>NPFFR2</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins, Predicted secreted proteins | 7 | 0.10 | 55 | 0.11 | #N/A | #N/A | #N/A | #N/A |
| <i>SUN3</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 7 | 0.10 | 51 | 0.10 | #N/A | #N/A | #N/A | #N/A |
| <i>TRIM55</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 11 | 0.16 | 30 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>TPTE</i> | 3. Predicted membrane proteins | Enzymes, Plasma proteins, Predicted membrane proteins | 12 | 0.18 | 45 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>PITX2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 16 | 0.03 | Upregulated DEGs | 8.49 | 2.57E-41 | 4.77E-40 |
| <i>COL11A1</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 16 | 0.03 | Upregulated DEGs | 6.99 | 5.55E-41 | 1.01E-39 |
| <i>CYP27B1</i> | 4. Others | Disease related genes, Enzymes, Mitochondrial proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 2.77 | 1.86E-38 | 2.99E-37 |

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|-----------------|-----------|---|---|------|----|------|------------------|------|----------|----------|
| <i>DMBX1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 15 | 0.03 | Upregulated DEGs | 6.66 | 2.93E-37 | 4.38E-36 |
| <i>METTL1</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 8 | 0.02 | Upregulated DEGs | 1.57 | 1.76E-36 | 2.49E-35 |
| <i>CARD14</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 4 | 0.06 | 10 | 0.02 | Upregulated DEGs | 3.86 | 1.81E-36 | 2.57E-35 |
| <i>C2CD4A</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 9 | 0.02 | Upregulated DEGs | 4.34 | 3.44E-36 | 4.8E-35 |
| <i>AKR7A3</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 16 | 0.03 | Upregulated DEGs | 5.95 | 2.11E-34 | 2.65E-33 |
| <i>C11orf86</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 29 | 0.06 | Upregulated DEGs | 8.15 | 3.98E-32 | 4.41E-31 |
| <i>MMP1</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 14 | 0.03 | Upregulated DEGs | 5.37 | 4.23E-31 | 4.45E-30 |
| <i>B3GNT6</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 16 | 0.03 | Upregulated DEGs | 5.98 | 8.55E-31 | 8.83E-30 |
| <i>CST1</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 16 | 0.03 | Upregulated DEGs | 6.62 | 1.11E-30 | 1.14E-29 |
| <i>MMP13</i> | 4. Others | Cancer-related genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 6 | 0.09 | 24 | 0.05 | Upregulated DEGs | 6.32 | 2.39E-30 | 2.39E-29 |
| <i>PROC</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 19 | 0.04 | Upregulated DEGs | 4.68 | 4.69E-30 | 4.58E-29 |
| <i>ONECUT2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 22 | 0.04 | Upregulated DEGs | 5.01 | 3.28E-29 | 3.07E-28 |
| <i>ATP6VIC2</i> | 4. Others | Predicted intracellular proteins, Transporters | 2 | 0.03 | 12 | 0.02 | Upregulated DEGs | 2.85 | 1.39E-28 | 1.24E-27 |
| <i>SPINK1</i> | 4. Others | Cancer-related genes, Disease | 8 | 0.12 | 32 | 0.06 | Upregulated | 7.04 | 1.88E-28 | 1.67E-27 |

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|----------------|-----------|--|---|------|----|------|-----------------------|-------|----------|----------|
| | | related genes, Plasma proteins, Predicted secreted proteins | | | | | DEGs | | | |
| <i>IL23A</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 12 | 0.02 | Upregulated DEGs | 2.85 | 1.17E-27 | 9.83E-27 |
| <i>CST4</i> | 4. Others | Predicted secreted proteins | 4 | 0.06 | 19 | 0.04 | Upregulated DEGs | 6.84 | 1.63E-27 | 1.36E-26 |
| <i>PAX6</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 8 | 0.12 | 7 | 0.01 | Downregulated DEGs | -1.30 | 1.87E-27 | 1.55E-26 |
| <i>C1orf61</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 39 | 0.08 | Upregulated DEGs | 6.17 | 2.74E-27 | 2.25E-26 |
| <i>COL22A1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 15 | 0.03 | Upregulated DEGs | 4.13 | 2.86E-27 | 2.34E-26 |
| <i>FGL1</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 51 | 0.10 | Upregulated DEGs | 7.78 | 4.47E-27 | 3.62E-26 |
| <i>HES6</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 14 | 0.03 | Upregulated DEGs | 3.12 | 6.83E-27 | 5.44E-26 |
| <i>VIL1</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 6 | 0.09 | 30 | 0.06 | Upregulated DEGs | 8.04 | 8.76E-27 | 6.93E-26 |
| <i>KRT86</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 19 | 0.04 | Upregulated DEGs | 3.29 | 4.08E-26 | 3.1E-25 |
| <i>BARX1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 22 | 0.04 | Upregulated DEGs | 7.86 | 1.71E-25 | 1.25E-24 |
| <i>NPW</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.10 | 42 | 0.08 | Upregulated DEGs | 5.55 | 1.93E-25 | 1.4E-24 |
| <i>INHA</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 61 | 0.12 | Upregulated DEGs | 6.83 | 3.38E-25 | 2.41E-24 |
| <i>DUSP9</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 16 | 0.03 | Upregulated DEGs | 4.81 | 4.78E-25 | 3.38E-24 |
| <i>ARTN</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 14 | 0.03 | Upregulated DEGs | 3.03 | 5.05E-25 | 3.57E-24 |
| <i>TRIM31</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 29 | 0.06 | Upregulated DEGs | 4.86 | 5.98E-25 | 4.2E-24 |
| <i>TESC</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 9 | 0.02 | Upregulated DEGs | 3.81 | 8.81E-25 | 6.13E-24 |
| <i>PRSS3</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, | 4 | 0.06 | 46 | 0.09 | Upregulated DEGs | 6.09 | 1.04E-24 | 7.19E-24 |

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|---------------|-----------|--|----|------|----|------|------------------|------|----------|----------|
| | | Predicted secreted proteins | | | | | | | | |
| <i>IGFL2</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 14 | 0.03 | Upregulated DEGs | 4.17 | 1.36E-24 | 9.39E-24 |
| <i>PAEP</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 53 | 0.10 | Upregulated DEGs | 8.08 | 2.21E-24 | 1.5E-23 |
| <i>PCP4</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 30 | 0.06 | Upregulated DEGs | 5.89 | 6.74E-24 | 4.44E-23 |
| <i>HGD</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 5 | 0.07 | 13 | 0.03 | Upregulated DEGs | 4.24 | 5.53E-23 | 3.43E-22 |
| <i>CXCL14</i> | 4. Others | Predicted secreted proteins | 4 | 0.06 | 30 | 0.06 | Upregulated DEGs | 4.44 | 5.55E-23 | 3.45E-22 |
| <i>AIM2</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 7 | 0.01 | Upregulated DEGs | 3.10 | 5.68E-23 | 3.53E-22 |
| <i>VGF</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 5 | 0.07 | 26 | 0.05 | Upregulated DEGs | 6.24 | 6.1E-23 | 3.78E-22 |
| <i>PADI1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 45 | 0.09 | Upregulated DEGs | 6.76 | 6.85E-23 | 4.22E-22 |
| <i>GNG4</i> | 4. Others | Predicted intracellular proteins, RAS pathway related proteins | 6 | 0.09 | 35 | 0.07 | Upregulated DEGs | 4.60 | 6.98E-23 | 4.3E-22 |
| <i>TUBB2B</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 8 | 0.12 | 30 | 0.06 | Upregulated DEGs | 4.47 | 7.59E-23 | 4.67E-22 |
| <i>CPS1</i> | 4. Others | Disease related genes, Enzymes, FDA approved drug targets, Mitochondrial proteins, Plasma proteins, Predicted intracellular proteins | 11 | 0.16 | 95 | 0.18 | Upregulated DEGs | 7.22 | 8.45E-23 | 5.18E-22 |
| <i>TFF1</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 59 | 0.11 | Upregulated DEGs | 9.63 | 1.08E-22 | 6.55E-22 |
| <i>IL11</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 12 | 0.02 | Upregulated DEGs | 2.94 | 1.32E-22 | 7.95E-22 |
| <i>MMP3</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Enzymes, FDA approved drug targets, | 4 | 0.06 | 18 | 0.03 | Upregulated DEGs | 4.57 | 3.41E-22 | 1.99E-21 |

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|----------------|-----------|---|----|------|----|------|------------------|------|----------|----------|
| | | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | | | | | | | | |
| <i>HOXB9</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 30 | 0.06 | Upregulated DEGs | 7.47 | 5.81E-22 | 3.36E-21 |
| <i>KRT81</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 7 | 0.10 | 44 | 0.09 | Upregulated DEGs | 5.73 | 6.03E-22 | 3.47E-21 |
| <i>TCN1</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 9 | 0.13 | 48 | 0.09 | Upregulated DEGs | 6.84 | 8.02E-22 | 4.58E-21 |
| <i>AKR1B10</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 74 | 0.14 | Upregulated DEGs | 7.86 | 1.3E-21 | 7.34E-21 |
| <i>QPCT</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 2.82 | 1.89E-21 | 1.06E-20 |
| <i>TRIM15</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 29 | 0.06 | Upregulated DEGs | 6.51 | 3.6E-21 | 1.97E-20 |
| <i>DOK5</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 8 | 0.02 | Upregulated DEGs | 2.58 | 4.17E-21 | 2.27E-20 |
| <i>GLB1L3</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 22 | 0.04 | Upregulated DEGs | 6.07 | 7.89E-21 | 4.21E-20 |
| <i>FGB</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 11 | 0.16 | 74 | 0.14 | Upregulated DEGs | 9.26 | 1.08E-20 | 5.7E-20 |
| <i>CRABP1</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 4 | 0.06 | 29 | 0.06 | Upregulated DEGs | 6.79 | 1.44E-20 | 7.54E-20 |
| <i>THPO</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted secreted proteins | 3 | 0.04 | 6 | 0.01 | Upregulated DEGs | 3.50 | 2.86E-20 | 1.47E-19 |
| <i>FGF19</i> | 4. Others | Cancer-related genes, Predicted secreted proteins, RAS pathway related proteins | 7 | 0.10 | 53 | 0.10 | Upregulated DEGs | 9.23 | 4.04E-20 | 2.05E-19 |
| <i>KLK6</i> | 4. Others | Cancer-related genes, Enzymes, Mitochondrial proteins, Plasma | 3 | 0.04 | 55 | 0.11 | Upregulated DEGs | 7.08 | 4.06E-20 | 2.06E-19 |

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|---------------|-----------|---|---|------|----|------|------------------|------|----------|----------|
| | | proteins, Predicted intracellular proteins, Predicted secreted proteins | | | | | | | | |
| <i>ENO3</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 38 | 0.07 | Upregulated DEGs | 3.35 | 4.52E-20 | 2.28E-19 |
| <i>HAL</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 6 | 0.09 | 17 | 0.03 | Upregulated DEGs | 3.47 | 4.58E-20 | 2.31E-19 |
| <i>PCSK1</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins, Predicted secreted proteins | 9 | 0.13 | 60 | 0.12 | Upregulated DEGs | 6.94 | 7.49E-20 | 3.72E-19 |
| <i>SP8</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 28 | 0.05 | Upregulated DEGs | 6.81 | 7.51E-20 | 3.73E-19 |
| <i>SOX11</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 38 | 0.07 | Upregulated DEGs | 5.03 | 8.22E-20 | 4.07E-19 |
| <i>SIX2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 8 | 0.02 | Upregulated DEGs | 3.49 | 1.17E-19 | 5.74E-19 |
| <i>GLDC</i> | 4. Others | Disease related genes, Enzymes, Mitochondrial proteins, Potential drug targets, Predicted intracellular proteins | 4 | 0.06 | 27 | 0.05 | Upregulated DEGs | 3.61 | 1.36E-19 | 6.64E-19 |
| <i>NCCRP1</i> | 4. Others | Predicted intracellular proteins | 8 | 0.12 | 26 | 0.05 | Upregulated DEGs | 3.98 | 1.44E-19 | 6.97E-19 |
| <i>PTHLH</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted secreted proteins | 5 | 0.07 | 19 | 0.04 | Upregulated DEGs | 3.01 | 2.01E-19 | 9.63E-19 |
| <i>SMOC1</i> | 4. Others | Disease related genes, Predicted secreted proteins | 4 | 0.06 | 24 | 0.05 | Upregulated DEGs | 4.12 | 2.59E-19 | 1.24E-18 |
| <i>MYCN</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 39 | 0.08 | Upregulated DEGs | 4.16 | 4.52E-19 | 2.13E-18 |

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|---------------|-----------|---|---|------|----|------|------------------|-------|----------|----------|
| <i>CRLF1</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 29 | 0.06 | Upregulated DEGs | 4.24 | 4.54E-19 | 2.13E-18 |
| <i>OGDHL</i> | 4. Others | Citric acid cycle related proteins, Mitochondrial proteins, Predicted intracellular proteins | 2 | 0.03 | 21 | 0.04 | Upregulated DEGs | 4.29 | 6.17E-19 | 2.87E-18 |
| <i>PAH</i> | 4. Others | Disease related genes, Enzymes, FDA approved drug targets, Predicted intracellular proteins | 6 | 0.09 | 46 | 0.09 | Upregulated DEGs | 7.07 | 6.73E-19 | 3.13E-18 |
| <i>ACMSD</i> | 4. Others | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 40 | 0.08 | Upregulated DEGs | 5.79 | 1.41E-18 | 6.42E-18 |
| <i>ALB</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 59 | 0.11 | Upregulated DEGs | 10.01 | 1.62E-18 | 7.34E-18 |
| <i>COL9A3</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 11 | 0.02 | Upregulated DEGs | 2.97 | 4.55E-18 | 2E-17 |
| <i>SCUBE3</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 11 | 0.02 | Upregulated DEGs | 2.78 | 7.21E-18 | 3.14E-17 |
| <i>AGT</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted secreted proteins | 5 | 0.07 | 22 | 0.04 | Upregulated DEGs | 3.24 | 8.77E-18 | 3.79E-17 |
| <i>KIF1A</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 7 | 0.10 | 53 | 0.10 | Upregulated DEGs | 5.90 | 8.93E-18 | 3.86E-17 |
| <i>SP5</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 12 | 0.02 | Upregulated DEGs | 2.59 | 8.96E-18 | 3.87E-17 |
| <i>ANKS4B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 68 | 0.13 | Upregulated DEGs | 6.64 | 1.18E-17 | 5.03E-17 |
| <i>MMP10</i> | 4. Others | Cancer-related genes, Enzymes, FDA approved drug targets, Predicted secreted proteins | 7 | 0.10 | 25 | 0.05 | Upregulated DEGs | 4.25 | 1.19E-17 | 5.09E-17 |
| <i>KRT6A</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 7 | 0.10 | 48 | 0.09 | Upregulated DEGs | 5.77 | 1.5E-17 | 6.38E-17 |

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|-----------------|-----------|---|----|------|----|------|------------------|-------|----------|----------|
| <i>POU3F2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 43 | 0.08 | Upregulated DEGs | 7.79 | 1.51E-17 | 6.42E-17 |
| <i>FAM133A</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 94 | 0.18 | Upregulated DEGs | 5.73 | 1.8E-17 | 7.59E-17 |
| <i>NPTX1</i> | 4. Others | Predicted secreted proteins | 6 | 0.09 | 44 | 0.09 | Upregulated DEGs | 4.10 | 2.9E-17 | 1.21E-16 |
| <i>KIAA1199</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 9 | 0.02 | Upregulated DEGs | 2.31 | 3.21E-17 | 1.34E-16 |
| <i>ANXA10</i> | 4. Others | Predicted intracellular proteins | 12 | 0.18 | 66 | 0.13 | Upregulated DEGs | 9.14 | 3.3E-17 | 1.37E-16 |
| <i>MYBPH</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 26 | 0.05 | Upregulated DEGs | 4.52 | 3.63E-17 | 1.51E-16 |
| <i>REG4</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 36 | 0.07 | Upregulated DEGs | 11.04 | 3.64E-17 | 1.51E-16 |
| <i>TRIM9</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 3 | 0.04 | 23 | 0.04 | Upregulated DEGs | 3.06 | 4.04E-17 | 1.67E-16 |
| <i>SPRR1B</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 8 | 0.12 | 45 | 0.09 | Upregulated DEGs | 6.69 | 4.18E-17 | 1.72E-16 |
| <i>CHGB</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.12 | 47 | 0.09 | Upregulated DEGs | 6.00 | 4.66E-17 | 1.92E-16 |
| <i>MUC6</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 65 | 0.13 | Upregulated DEGs | 6.69 | 4.96E-17 | 2.03E-16 |
| <i>SALL1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Transcription factors | 10 | 0.15 | 67 | 0.13 | Upregulated DEGs | 6.20 | 6.05E-17 | 2.46E-16 |
| <i>ARL14</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 38 | 0.07 | Upregulated DEGs | 5.06 | 8.43E-17 | 3.39E-16 |
| <i>HOXB13</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 23 | 0.04 | Upregulated DEGs | 6.82 | 1.84E-16 | 7.25E-16 |
| <i>DLX5</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 13 | 0.03 | Upregulated DEGs | 2.91 | 2.33E-16 | 9.12E-16 |
| <i>MUC5B</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted | 9 | 0.13 | 19 | 0.04 | Upregulated DEGs | 4.10 | 2.79E-16 | 1.08E-15 |

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|----------------|-----------|---|---|------|----|------|------------------|------|----------|----------|
| | | proteins | | | | | | | | |
| <i>KLHDC7B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.97 | 4.47E-16 | 1.7E-15 |
| <i>TF</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 50 | 0.10 | Upregulated DEGs | 4.99 | 5.39E-16 | 2.05E-15 |
| <i>UBE2QL1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 7 | 0.10 | 15 | 0.03 | Upregulated DEGs | 2.65 | 5.78E-16 | 2.19E-15 |
| <i>PRSS1</i> | 4. Others | Cancer-related genes, Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 54 | 0.10 | Upregulated DEGs | 6.87 | 6.15E-16 | 2.32E-15 |
| <i>CALCA</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins, Transporters | 4 | 0.06 | 80 | 0.15 | Upregulated DEGs | 9.01 | 6.86E-16 | 2.58E-15 |
| <i>CDK5R2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 26 | 0.05 | Upregulated DEGs | 4.49 | 9.3E-16 | 3.46E-15 |
| <i>PGF</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins, RAS pathway related proteins | 4 | 0.06 | 6 | 0.01 | Upregulated DEGs | 1.66 | 9.61E-16 | 3.57E-15 |
| <i>EPS8L3</i> | 4. Others | Predicted intracellular proteins | 8 | 0.12 | 77 | 0.15 | Upregulated DEGs | 8.68 | 1.11E-15 | 4.12E-15 |
| <i>INA</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 60 | 0.12 | Upregulated DEGs | 4.26 | 5.32E-15 | 1.87E-14 |
| <i>IVL</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 7 | 0.10 | 24 | 0.05 | Upregulated DEGs | 4.42 | 1.02E-14 | 3.54E-14 |
| <i>OLFM4</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 52 | 0.10 | Upregulated DEGs | 6.66 | 1.46E-14 | 5E-14 |
| <i>KLK12</i> | 4. Others | Enzymes, Predicted secreted proteins | 2 | 0.03 | 67 | 0.13 | Upregulated DEGs | 6.63 | 2.11E-14 | 7.14E-14 |
| <i>PADI3</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 58 | 0.11 | Upregulated DEGs | 7.57 | 3.47E-14 | 1.16E-13 |

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|---------------|-----------|--|---|------|----|------|------------------|------|----------|----------|
| <i>UNC13A</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 41 | 0.08 | Upregulated DEGs | 2.99 | 3.9E-14 | 1.29E-13 |
| <i>KRT6B</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 49 | 0.09 | Upregulated DEGs | 4.77 | 4.29E-14 | 1.42E-13 |
| <i>PI15</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 6 | 0.01 | Upregulated DEGs | 2.58 | 4.51E-14 | 1.49E-13 |
| <i>TFF3</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 27 | 0.05 | Upregulated DEGs | 3.15 | 4.73E-14 | 1.56E-13 |
| <i>USH1C</i> | 4. Others | Cancer-related genes, Cytoskeleton related proteins, Disease related genes, Predicted intracellular proteins | 7 | 0.10 | 58 | 0.11 | Upregulated DEGs | 4.76 | 5.28E-14 | 1.74E-13 |
| <i>NPTX2</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 20 | 0.04 | Upregulated DEGs | 2.77 | 6.52E-14 | 2.13E-13 |
| <i>CEL</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted secreted proteins | 2 | 0.03 | 34 | 0.07 | Upregulated DEGs | 3.55 | 6.78E-14 | 2.22E-13 |
| <i>SYCP2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 31 | 0.06 | Upregulated DEGs | 2.51 | 7.51E-14 | 2.44E-13 |
| <i>FSTL4</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 20 | 0.04 | Upregulated DEGs | 2.77 | 7.87E-14 | 2.56E-13 |
| <i>HOXB8</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 34 | 0.07 | Upregulated DEGs | 3.76 | 8.05E-14 | 2.61E-13 |
| <i>C4BPB</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 4 | 0.06 | 6 | 0.01 | Upregulated DEGs | 2.67 | 9.23E-14 | 2.99E-13 |
| <i>DHRS2</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 26 | 0.05 | Upregulated DEGs | 4.05 | 9.31E-14 | 3.01E-13 |
| <i>AMBP</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 24 | 0.05 | Upregulated DEGs | 4.02 | 1.04E-13 | 3.36E-13 |
| <i>ECM1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 15 | 0.03 | Upregulated DEGs | 1.84 | 1.29E-13 | 4.12E-13 |
| <i>CALB1</i> | 4. Others | Predicted intracellular proteins | 8 | 0.12 | 43 | 0.08 | Upregulated DEGs | 7.75 | 1.31E-13 | 4.19E-13 |

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|----------------|-----------|--|----|------|----|------|------------------|------|----------|----------|
| <i>SYT13</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 29 | 0.06 | Upregulated DEGs | 4.21 | 1.51E-13 | 4.83E-13 |
| <i>F5</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 11 | 0.16 | 27 | 0.05 | Upregulated DEGs | 2.49 | 1.65E-13 | 5.23E-13 |
| <i>TRY6</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 47 | 0.09 | Upregulated DEGs | 6.16 | 1.73E-13 | 5.48E-13 |
| <i>RUNDC3A</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 33 | 0.06 | Upregulated DEGs | 2.76 | 2.14E-13 | 6.74E-13 |
| <i>KRT17</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 11 | 0.16 | 21 | 0.04 | Upregulated DEGs | 2.83 | 3.38E-13 | 1.05E-12 |
| <i>MAGEC1</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 8 | 0.12 | 61 | 0.12 | Upregulated DEGs | 8.14 | 3.95E-13 | 1.22E-12 |
| <i>CST2</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 6 | 0.01 | Upregulated DEGs | 2.47 | 5.36E-13 | 1.63E-12 |
| <i>NDP</i> | 4. Others | Disease related genes, Predicted secreted proteins | 6 | 0.09 | 27 | 0.05 | Upregulated DEGs | 3.40 | 5.51E-13 | 1.68E-12 |
| <i>TNNI3</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 7 | 0.01 | Upregulated DEGs | 3.25 | 5.86E-13 | 1.78E-12 |
| <i>KRT6C</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 9 | 0.13 | 48 | 0.09 | Upregulated DEGs | 4.75 | 9.33E-13 | 2.79E-12 |
| <i>MMP7</i> | 4. Others | Cancer-related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 9 | 0.02 | Upregulated DEGs | 2.19 | 1.1E-12 | 3.28E-12 |
| <i>CA10</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 59 | 0.11 | Upregulated DEGs | 5.28 | 1.44E-12 | 4.25E-12 |
| <i>ZG16B</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 20 | 0.04 | Upregulated DEGs | 2.63 | 2.27E-12 | 6.62E-12 |

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|-----------------|-----------|--|----|------|----|------|--------------------|-------|----------|----------|
| <i>ZMAT4</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 59 | 0.11 | Upregulated DEGs | 5.00 | 2.4E-12 | 7E-12 |
| <i>NEFH</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 14 | 0.21 | 78 | 0.15 | Upregulated DEGs | 2.82 | 6.03E-12 | 1.71E-11 |
| <i>ZNF385B</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 17 | 0.03 | Downregulated DEGs | -1.61 | 6.17E-12 | 1.75E-11 |
| <i>CGA</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 10 | 0.15 | 60 | 0.12 | Upregulated DEGs | 9.46 | 7.83E-12 | 2.21E-11 |
| <i>FGA</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 10 | 0.15 | 67 | 0.13 | Upregulated DEGs | 4.07 | 8.35E-12 | 2.35E-11 |
| <i>SYNC</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 10 | 0.02 | Downregulated DEGs | -1.10 | 8.86E-12 | 2.49E-11 |
| <i>GDA</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 6 | 0.09 | 50 | 0.10 | Upregulated DEGs | 3.65 | 1.16E-11 | 3.25E-11 |
| <i>HOXB3</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.53 | 1.62E-11 | 4.47E-11 |
| <i>BCAS1</i> | 4. Others | Predicted intracellular proteins | 7 | 0.10 | 7 | 0.01 | Upregulated DEGs | 2.28 | 1.62E-11 | 4.47E-11 |
| <i>LYPD6B</i> | 4. Others | Predicted secreted proteins, Transporters | 5 | 0.07 | 8 | 0.02 | Upregulated DEGs | 2.25 | 1.71E-11 | 4.71E-11 |
| <i>DOK6</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 10 | 0.02 | Downregulated DEGs | -1.13 | 1.82E-11 | 5.01E-11 |
| <i>KLHL35</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 6 | 0.01 | Upregulated DEGs | 1.50 | 1.86E-11 | 5.11E-11 |
| <i>SERPINA5</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 4 | 0.06 | 34 | 0.07 | Upregulated DEGs | 2.56 | 2.13E-11 | 5.81E-11 |
| <i>CELF3</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 70 | 0.14 | Upregulated DEGs | 5.15 | 2.83E-11 | 7.67E-11 |
| <i>LGALS4</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular | 5 | 0.07 | 82 | 0.16 | Upregulated DEGs | 4.04 | 2.87E-11 | 7.77E-11 |

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|-----------------|-----------|---|----|------|----|------|------------------|------|----------|----------|
| | | proteins | | | | | | | | |
| <i>CYP4F11</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 25 | 0.05 | Upregulated DEGs | 3.18 | 3.31E-11 | 8.92E-11 |
| <i>ZNF114</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 10 | 0.02 | Upregulated DEGs | 2.29 | 3.42E-11 | 9.22E-11 |
| <i>HSPA6</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.38 | 4.3E-11 | 1.15E-10 |
| <i>MAGEA8</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 36 | 0.07 | Upregulated DEGs | 6.27 | 4.34E-11 | 1.16E-10 |
| <i>IGFBP1</i> | 4. Others | Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 5 | 0.07 | 34 | 0.07 | Upregulated DEGs | 4.58 | 5.58E-11 | 1.48E-10 |
| <i>PI3</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 9 | 0.13 | 31 | 0.06 | Upregulated DEGs | 3.25 | 6.53E-11 | 1.72E-10 |
| <i>CYP2E1</i> | 4. Others | Cancer-related genes, Enzymes, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 11 | 0.02 | Upregulated DEGs | 1.83 | 7.42E-11 | 1.94E-10 |
| <i>C9orf169</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 10 | 0.02 | Upregulated DEGs | 1.88 | 7.91E-11 | 2.07E-10 |
| <i>CHST4</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 25 | 0.05 | Upregulated DEGs | 2.40 | 7.97E-11 | 2.08E-10 |
| <i>FBN2</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.10 | 25 | 0.05 | Upregulated DEGs | 2.68 | 1.13E-10 | 2.93E-10 |
| <i>DPEP1</i> | 4. Others | Enzymes, FDA approved drug targets, Predicted secreted proteins | 3 | 0.04 | 11 | 0.02 | Upregulated DEGs | 2.06 | 1.14E-10 | 2.96E-10 |
| <i>PLAT</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 3 | 0.04 | 31 | 0.06 | Upregulated DEGs | 1.81 | 1.18E-10 | 3.05E-10 |
| <i>KLK8</i> | 4. Others | Cancer-related genes, Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 10 | 0.15 | 57 | 0.11 | Upregulated DEGs | 5.55 | 1.46E-10 | 3.77E-10 |

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|-----------------|-----------|--|----|------|----|------|--------------------|-------|----------|----------|
| <i>TDRD1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.06 | 57 | 0.11 | Upregulated DEGs | 3.52 | 1.48E-10 | 3.8E-10 |
| <i>SDS</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | Upregulated DEGs | 1.52 | 2.38E-10 | 6.03E-10 |
| <i>EDN2</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 12 | 0.02 | Upregulated DEGs | 2.04 | 2.5E-10 | 6.32E-10 |
| <i>RASSF6</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 12 | 0.02 | Upregulated DEGs | 1.32 | 2.64E-10 | 6.67E-10 |
| <i>SIM2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.58 | 2.77E-10 | 6.98E-10 |
| <i>PKDCC</i> | 4. Others | Enzymes, Predicted secreted proteins | 3 | 0.04 | 11 | 0.02 | Downregulated DEGs | -1.05 | 2.96E-10 | 7.43E-10 |
| <i>TBX18</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 31 | 0.06 | Upregulated DEGs | 2.89 | 3.59E-10 | 8.96E-10 |
| <i>SOX15</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 17 | 0.03 | Upregulated DEGs | 1.62 | 4.32E-10 | 1.07E-09 |
| <i>EYA2</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 11 | 0.16 | 18 | 0.03 | Upregulated DEGs | 2.08 | 5.08E-10 | 1.26E-09 |
| <i>ANGPTL4</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.64 | 7.71E-10 | 1.88E-09 |
| <i>MTMR7</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 38 | 0.07 | Upregulated DEGs | 2.05 | 8.49E-10 | 2.06E-09 |
| <i>SPRR3</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 9 | 0.13 | 51 | 0.10 | Upregulated DEGs | 5.09 | 1.27E-09 | 3.04E-09 |
| <i>KIF5C</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 32 | 0.06 | Upregulated DEGs | 1.78 | 1.83E-09 | 4.33E-09 |
| <i>SPRR1A</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 35 | 0.07 | Upregulated DEGs | 4.26 | 1.85E-09 | 4.38E-09 |
| <i>ASCL2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 12 | 0.02 | Upregulated DEGs | 1.48 | 2.48E-09 | 5.8E-09 |
| <i>SERPINB4</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 5 | 0.07 | 42 | 0.08 | Upregulated DEGs | 3.99 | 3.27E-09 | 7.58E-09 |
| <i>PKP1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 32 | 0.06 | Upregulated DEGs | 2.38 | 3.96E-09 | 9.14E-09 |

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|----------------|-----------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>CAPN13</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 10 | 0.02 | Upregulated DEGs | 1.77 | 4.15E-09 | 9.57E-09 |
| <i>PDE1C</i> | 4. Others | Enzymes, Predicted intracellular proteins | 7 | 0.10 | 14 | 0.03 | Downregulated DEGs | -1.30 | 6.38E-09 | 1.44E-08 |
| <i>LAMA1</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 9 | 0.13 | 19 | 0.04 | Upregulated DEGs | 2.03 | 6.58E-09 | 1.49E-08 |
| <i>CHI3L1</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 11 | 0.16 | 15 | 0.03 | Upregulated DEGs | 1.57 | 7.07E-09 | 1.59E-08 |
| <i>ANK1</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 23 | 0.04 | Upregulated DEGs | 1.58 | 1.07E-08 | 2.39E-08 |
| <i>ORM2</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 27 | 0.05 | Upregulated DEGs | 2.24 | 1.25E-08 | 2.77E-08 |
| <i>RIMBP2</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 43 | 0.08 | Upregulated DEGs | 2.72 | 1.34E-08 | 2.96E-08 |
| <i>TPRG1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 12 | 0.02 | Non-differentially expressed genes | -0.97 | 1.58E-08 | 3.48E-08 |
| <i>HOXD1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.72 | 0.000000018 | 3.94E-08 |
| <i>DSCR6</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.68 | 2.68E-08 | 5.77E-08 |
| <i>MUCL1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.10 | 43 | 0.08 | Upregulated DEGs | 3.94 | 6.66E-08 | 0.00000014 |
| <i>COL28A1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 9 | 0.02 | Upregulated DEGs | 1.67 | 6.87E-08 | 0.000000144 |
| <i>AMPH</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 6 | 0.09 | 22 | 0.04 | Upregulated DEGs | 1.64 | 7.43E-08 | 0.000000155 |
| <i>KRT23</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 41 | 0.08 | Upregulated DEGs | 2.66 | 0.000000114 | 0.000000235 |
| <i>NEURL</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 55 | 0.11 | Upregulated DEGs | 1.93 | 0.000000121 | 0.000000249 |
| <i>BAAT</i> | 4. Others | Disease related genes, Enzymes, | 3 | 0.04 | 23 | 0.04 | Upregulated | 1.90 | 0.000000155 | 0.000000317 |

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|-----------------|-----------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| | | Potential drug targets, Predicted intracellular proteins | | | | | DEGs | | | |
| <i>ORM1</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 3 | 0.04 | 29 | 0.06 | Upregulated DEGs | 1.90 | 0.000000192 | 0.000000389 |
| <i>HS3ST3A1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 9 | 0.02 | Upregulated DEGs | 1.04 | 0.000000216 | 0.000000436 |
| <i>MAT1A</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 14 | 0.03 | Upregulated DEGs | 1.66 | 0.000000232 | 0.000000467 |
| <i>ADH1C</i> | 4. Others | Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins | 5 | 0.07 | 25 | 0.05 | Upregulated DEGs | 2.28 | 0.000000241 | 0.000000485 |
| <i>MYCL1</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 18 | 0.03 | Upregulated DEGs | 1.07 | 0.000000249 | 0.0000005 |
| <i>PEG3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 9 | 0.02 | Non-differentially expressed genes | -0.96 | 0.000000367 | 0.000000727 |
| <i>PLA2G10</i> | 4. Others | Enzymes, Predicted secreted proteins, RAS pathway related proteins | 4 | 0.06 | 14 | 0.03 | Upregulated DEGs | 1.49 | 0.000000788 | 0.00000152 |
| <i>CPE</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 8 | 0.02 | Upregulated DEGs | 1.14 | 0.000000851 | 0.00000164 |
| <i>EML6</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 11 | 0.02 | Upregulated DEGs | 1.05 | 0.000000908 | 0.00000174 |
| <i>DYNC111</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 9 | 0.02 | Upregulated DEGs | 1.15 | 0.00000102 | 0.00000195 |
| <i>CYP2C18</i> | 4. Others | Enzymes, Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 18 | 0.03 | Upregulated DEGs | 1.66 | 0.00000113 | 0.00000215 |
| <i>MYO16</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 30 | 0.06 | Upregulated DEGs | 1.43 | 0.00000124 | 0.00000235 |
| <i>CSTA</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, | 10 | 0.15 | 9 | 0.02 | Non-differentially | -0.85 | 0.00000128 | 0.00000243 |

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|---------------|-----------|---|----|------|----|------|------------------------------------|-------|------------|------------|
| | | Predicted intracellular proteins | | | | | expressed genes | | | |
| <i>CCL20</i> | 4. Others | Predicted secreted proteins | 11 | 0.16 | 13 | 0.03 | Upregulated DEGs | 1.46 | 0.0000017 | 0.00000318 |
| <i>AP3B2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 19 | 0.04 | Upregulated DEGs | 1.67 | 0.00000176 | 0.00000329 |
| <i>ZNF208</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 40 | 0.08 | Upregulated DEGs | 1.41 | 0.00000183 | 0.00000343 |
| <i>DDC</i> | 4. Others | Disease related genes, Enzymes, FDA approved drug targets, Predicted intracellular proteins | 6 | 0.09 | 46 | 0.09 | Upregulated DEGs | 2.27 | 0.00000204 | 0.00000379 |
| <i>GATM</i> | 4. Others | Disease related genes, Enzymes, Mitochondrial proteins, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 7 | 0.01 | Non-differentially expressed genes | 0.98 | 0.00000234 | 0.00000434 |
| <i>SYTL5</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 13 | 0.03 | Upregulated DEGs | 1.38 | 0.00000239 | 0.00000443 |
| <i>SPINK5</i> | 4. Others | Disease related genes, Plasma proteins, Predicted secreted proteins | 4 | 0.06 | 27 | 0.05 | Upregulated DEGs | 1.66 | 0.00000296 | 0.00000544 |
| <i>HOXB6</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 9 | 0.02 | Upregulated DEGs | 1.12 | 0.00000349 | 0.00000638 |
| <i>ARX</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Transcription factors | 6 | 0.09 | 22 | 0.04 | Upregulated DEGs | 1.69 | 0.00000442 | 0.00000802 |
| <i>S100A9</i> | 4. Others | Cancer-related genes, Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 8 | 0.12 | 16 | 0.03 | Upregulated DEGs | 1.39 | 0.00000453 | 0.0000082 |
| <i>PLCXD3</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 11 | 0.02 | Downregulated DEGs | -1.04 | 0.00000775 | 0.0000138 |
| <i>TRO</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | 0.83 | 0.00000911 | 0.0000161 |
| <i>DEFB1</i> | 4. Others | Predicted secreted proteins, Transporters | 7 | 0.10 | 18 | 0.03 | Upregulated DEGs | 1.64 | 0.0000113 | 0.0000198 |
| <i>FST</i> | 4. Others | Cancer-related genes, Candidate | 4 | 0.06 | 33 | 0.06 | Upregulated | 1.46 | 0.0000121 | 0.0000211 |

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|----------------|-----------|---|---|------|----|------|------------------------------------|-------|-----------|-----------|
| | | cardiovascular disease genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | | | | | DEGs | | | |
| <i>EFHD1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 18 | 0.03 | Upregulated DEGs | 1.09 | 0.0000169 | 0.0000291 |
| <i>PLA1A</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins, RAS pathway related proteins | 2 | 0.03 | 12 | 0.02 | Non-differentially expressed genes | -0.81 | 0.0000173 | 0.0000299 |
| <i>DNM3</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 6 | 0.09 | 14 | 0.03 | Non-differentially expressed genes | -0.73 | 0.000018 | 0.0000309 |
| <i>PLA2G3</i> | 4. Others | Enzymes, Predicted secreted proteins, RAS pathway related proteins | 2 | 0.03 | 10 | 0.02 | Downregulated DEGs | -1.16 | 0.0000183 | 0.0000315 |
| <i>AZGP1</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.12 | 24 | 0.05 | Upregulated DEGs | 1.61 | 0.0000192 | 0.0000329 |
| <i>SAMD11</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | 0.87 | 0.0000193 | 0.0000332 |
| <i>CTSE</i> | 4. Others | Enzymes, Predicted secreted proteins | 4 | 0.06 | 15 | 0.03 | Upregulated DEGs | 1.40 | 0.0000208 | 0.0000355 |
| <i>PROX1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 14 | 0.03 | Upregulated DEGs | 1.21 | 0.0000248 | 0.0000422 |
| <i>VNN1</i> | 4. Others | Enzymes, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 36 | 0.07 | Upregulated DEGs | 1.21 | 0.0000256 | 0.0000435 |
| <i>PAPPA</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Enzymes, Plasma proteins, Predicted secreted proteins | 6 | 0.09 | 9 | 0.02 | Upregulated DEGs | 1.03 | 0.000026 | 0.0000441 |
| <i>ADAMTS6</i> | 4. Others | Cancer-related genes, Enzymes, Predicted secreted proteins | 4 | 0.06 | 6 | 0.01 | Non-differentially | 0.78 | 0.0000288 | 0.0000488 |

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|-----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | expressed genes | | | |
| <i>LRRC17</i> | 4. Others | Predicted secreted proteins | 5 | 0.07 | 6 | 0.01 | Non-differentially expressed genes | 0.75 | 0.0000363 | 0.0000609 |
| <i>C12orf34</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | 0.78 | 0.0000383 | 0.0000642 |
| <i>CRISPLD1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.06 | 13 | 0.03 | Upregulated DEGs | 1.03 | 0.0000395 | 0.0000661 |
| <i>CNTN4</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | -0.81 | 0.0000445 | 0.0000741 |
| <i>MMP28</i> | 4. Others | Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.06 | 7 | 0.01 | Non-differentially expressed genes | -0.95 | 0.0000487 | 0.000081 |
| <i>APOD</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 7 | 0.01 | Upregulated DEGs | 1.08 | 0.0000554 | 0.0000917 |
| <i>LOXL4</i> | 4. Others | Predicted secreted proteins | 5 | 0.07 | 18 | 0.03 | Non-differentially expressed genes | 0.93 | 0.0000723 | 0.000118529 |
| <i>CRYM</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 9 | 0.02 | Upregulated DEGs | 1.19 | 0.0000817 | 0.000133261 |
| <i>GAS2</i> | 4. Others | Predicted intracellular proteins | 7 | 0.10 | 21 | 0.04 | Upregulated DEGs | 1.09 | 0.0000982 | 0.000159215 |
| <i>CAPN6</i> | 4. Others | Cancer-related genes, Enzymes, Predicted intracellular proteins | 2 | 0.03 | 39 | 0.08 | Upregulated DEGs | 1.65 | 0.0000993 | 0.000160867 |
| <i>PIPOX</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 25 | 0.05 | Non-differentially expressed genes | 0.96 | 0.000111905 | 0.000180446 |

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|-----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>SNAP25</i> | 4. Others | FDA approved drug targets, Predicted intracellular proteins, Transporters | 3 | 0.04 | 21 | 0.04 | Upregulated DEGs | 1.13 | 0.000131807 | 0.000211689 |
| <i>ALDH1A1</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 6 | 0.09 | 6 | 0.01 | Non-differentially expressed genes | -0.79 | 0.000139369 | 0.000223354 |
| <i>SYN1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 12 | 0.02 | Non-differentially expressed genes | 0.73 | 0.000176544 | 0.000280545 |
| <i>OS9</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 7 | 0.01 | Non-differentially expressed genes | 0.33 | 0.000180103 | 0.000285987 |
| <i>RASL11A</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 8 | 0.02 | Non-differentially expressed genes | -0.56 | 0.000276939 | 0.000431834 |
| <i>CXCL6</i> | 4. Others | Predicted secreted proteins | 8 | 0.12 | 16 | 0.03 | Upregulated DEGs | 1.27 | 0.000315632 | 0.000489657 |
| <i>SERPINA3</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 23 | 0.04 | Upregulated DEGs | 1.12 | 0.000343778 | 0.000531439 |
| <i>PDE7B</i> | 4. Others | Enzymes, FDA approved drug targets, Predicted intracellular proteins | 2 | 0.03 | 7 | 0.01 | Non-differentially expressed genes | -0.57 | 0.000382673 | 0.000588999 |
| <i>BMP7</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 19 | 0.04 | Upregulated DEGs | 1.09 | 0.000479385 | 0.000730083 |
| <i>TNNT2</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Predicted intracellular proteins | 4 | 0.06 | 11 | 0.02 | Non-differentially expressed genes | -0.82 | 0.000486202 | 0.000740163 |
| <i>NOTUM</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 38 | 0.07 | Upregulated DEGs | 1.34 | 0.000590295 | 0.000892288 |

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|----------------|-----------|---|----|------|----|------|------------------------------------|------|-------------|-------------|
| <i>APOM</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 8 | 0.02 | Non-differentially expressed genes | 0.77 | 0.000595505 | 0.000899661 |
| <i>FGG</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 10 | 0.15 | 29 | 0.06 | Upregulated DEGs | 1.52 | 0.000599438 | 0.000905052 |
| <i>SPESPI</i> | 4. Others | Predicted secreted proteins | 10 | 0.15 | 47 | 0.09 | Upregulated DEGs | 1.01 | 0.000622064 | 0.000937598 |
| <i>RARRES1</i> | 4. Others | Predicted secreted proteins | 7 | 0.10 | 14 | 0.03 | Non-differentially expressed genes | 0.76 | 0.000640973 | 0.000964731 |
| <i>AMDHD1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | 0.94 | 0.000786744 | 0.001173929 |
| <i>CXCL11</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 7 | 0.01 | Non-differentially expressed genes | 0.83 | 0.0011298 | 0.001662495 |
| <i>DBC1</i> | 4. Others | Predicted secreted proteins | 6 | 0.09 | 33 | 0.06 | Upregulated DEGs | 1.34 | 0.001394811 | 0.002035963 |
| <i>TRIM29</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 29 | 0.06 | Upregulated DEGs | 1.13 | 0.001441946 | 0.002102291 |
| <i>HS3ST5</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 27 | 0.05 | Upregulated DEGs | 1.21 | 0.001457736 | 0.002124481 |
| <i>GBP6</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 15 | 0.03 | Non-differentially expressed genes | 0.97 | 0.002146846 | 0.003084706 |
| <i>RGS4</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 7 | 0.10 | 7 | 0.01 | Non-differentially expressed genes | 0.64 | 0.002855865 | 0.00405766 |

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|-----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>BTBD3</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 6 | 0.01 | Non-differentially expressed genes | -0.31 | 0.002929007 | 0.004158805 |
| <i>AR</i> | 4. Others | Cancer-related genes, Disease related genes, FDA approved drug targets, Nuclear receptors, Plasma proteins, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 10 | 0.02 | Non-differentially expressed genes | -0.65 | 0.003235869 | 0.004572711 |
| <i>ADAMTS3</i> | 4. Others | Cancer-related genes, Enzymes, Predicted secreted proteins | 4 | 0.06 | 8 | 0.02 | Non-differentially expressed genes | 0.59 | 0.003547584 | 0.004993778 |
| <i>NOS3</i> | 4. Others | Cancer-related genes, Cytoskeleton related proteins, Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins | 9 | 0.13 | 14 | 0.03 | Non-differentially expressed genes | 0.64 | 0.003575657 | 0.005031869 |
| <i>FOXL1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 19 | 0.04 | Non-differentially expressed genes | 0.63 | 0.003731678 | 0.005238559 |
| <i>FGF12</i> | 4. Others | Predicted intracellular proteins, RAS pathway related proteins | 3 | 0.04 | 32 | 0.06 | Non-differentially expressed genes | 0.88 | 0.003880936 | 0.005437838 |
| <i>CDC42EP5</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 2 | 0.03 | 10 | 0.02 | Non-differentially expressed genes | 0.57 | 0.00424052 | 0.005917734 |
| <i>HOXA7</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 11 | 0.02 | Non-differentially expressed genes | -0.51 | 0.004261959 | 0.005946538 |
| <i>C4BPA</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 14 | 0.03 | Non-differentially expressed genes | -0.71 | 0.004269291 | 0.00595621 |

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|----------------|-----------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>PHACTR3</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 17 | 0.03 | Non-differentially expressed genes | 0.88 | 0.0053169 | 0.007334623 |
| <i>PADI2</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 10 | 0.02 | Non-differentially expressed genes | 0.58 | 0.005529061 | 0.007614602 |
| <i>HAPLN1</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 19 | 0.04 | Non-differentially expressed genes | 0.91 | 0.005644112 | 0.007764433 |
| <i>CSF2</i> | 4. Others | Cancer-related genes, Predicted secreted proteins | 3 | 0.04 | 8 | 0.02 | Non-differentially expressed genes | 0.72 | 0.008045565 | 0.010896925 |
| <i>TCHH</i> | 4. Others | Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 5 | 0.07 | 16 | 0.03 | Non-differentially expressed genes | 0.76 | 0.008544134 | 0.01153861 |
| <i>RSPO3</i> | 4. Others | Cancer-related genes, Predicted secreted proteins | 10 | 0.15 | 30 | 0.06 | Non-differentially expressed genes | 0.80 | 0.010185981 | 0.013633488 |
| <i>HGF</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins, Predicted secreted proteins, RAS pathway related proteins | 6 | 0.09 | 6 | 0.01 | Non-differentially expressed genes | -0.49 | 0.010364389 | 0.013862312 |
| <i>MUMILI</i> | 4. Others | Predicted intracellular proteins | 9 | 0.13 | 9 | 0.02 | Non-differentially expressed genes | 0.78 | 0.013036554 | 0.017255012 |
| <i>STC1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially | 0.53 | 0.014546312 | 0.019149493 |

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|----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | expressed genes | | | |
| <i>MKX</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 12 | 0.02 | Non-differentially expressed genes | 0.66 | 0.014650784 | 0.019280209 |
| <i>SULT2B1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 6 | 0.01 | Non-differentially expressed genes | -0.43 | 0.022477662 | 0.029043886 |
| <i>DACT2</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 8 | 0.02 | Non-differentially expressed genes | 0.74 | 0.026111739 | 0.033498331 |
| <i>VILL</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.06 | 18 | 0.03 | Non-differentially expressed genes | 0.53 | 0.029156052 | 0.037194665 |
| <i>ARNT2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 7 | 0.01 | Non-differentially expressed genes | -0.40 | 0.030086518 | 0.038316959 |
| <i>NOG</i> | 4. Others | Disease related genes, Predicted secreted proteins | 3 | 0.04 | 11 | 0.02 | Non-differentially expressed genes | 0.53 | 0.034540298 | 0.043679092 |
| <i>FGF18</i> | 4. Others | Cancer-related genes, Predicted secreted proteins, RAS pathway related proteins | 3 | 0.04 | 18 | 0.03 | Non-differentially expressed genes | -0.48 | 0.039540306 | 0.049635348 |
| <i>PRODH</i> | 4. Others | Disease related genes, Enzymes, Mitochondrial proteins, Potential drug targets, Predicted intracellular proteins | 8 | 0.12 | 6 | 0.01 | Non-differentially expressed genes | 0.54 | 0.039916392 | 0.050094786 |
| <i>SNCAIP</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 11 | 0.02 | Non-differentially expressed genes | -0.36 | 0.042306609 | 0.052956154 |

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|-----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>IDO1</i> | 4. Others | Cancer-related genes, Enzymes, Predicted intracellular proteins | 8 | 0.12 | 11 | 0.02 | Non-differentially expressed genes | 0.48 | 0.044445811 | 0.055521848 |
| <i>RIMKLA</i> | 4. Others | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 8 | 0.02 | Non-differentially expressed genes | -0.39 | 0.046036706 | 0.057388856 |
| <i>GSTA1</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 11 | 0.02 | Non-differentially expressed genes | 0.69 | 0.051030104 | 0.063243018 |
| <i>GREM2</i> | 4. Others | Predicted secreted proteins | 4 | 0.06 | 23 | 0.04 | Non-differentially expressed genes | 0.56 | 0.066937417 | 0.081713029 |
| <i>C5</i> | 4. Others | Disease related genes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 3 | 0.04 | 18 | 0.03 | Non-differentially expressed genes | 0.45 | 0.070647456 | 0.085988278 |
| <i>ATP6V1B1</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 3 | 0.04 | 22 | 0.04 | Non-differentially expressed genes | 0.49 | 0.077732051 | 0.094134285 |
| <i>APOH</i> | 4. Others | Candidate cardiovascular disease genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 10 | 0.02 | Non-differentially expressed genes | 0.63 | 0.08901597 | 0.106912487 |
| <i>LGALS2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | -0.37 | 0.096952988 | 0.115791568 |
| <i>CACNB2</i> | 4. Others | Disease related genes, FDA approved drug targets, Predicted intracellular proteins, Transporters | 2 | 0.03 | 18 | 0.03 | Non-differentially expressed genes | 0.32 | 0.114466175 | 0.135222078 |
| <i>PLA2G12B</i> | 4. Others | Plasma proteins, Predicted secreted proteins, RAS pathway | 2 | 0.03 | 7 | 0.01 | Non-differentially | 0.55 | 0.115033124 | 0.135837957 |

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|---------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | related proteins | | | | | expressed genes | | | |
| <i>SPAG17</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 6 | 0.01 | Non-differentially expressed genes | -0.39 | 0.121396378 | 0.142876266 |
| <i>B3GNT7</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 9 | 0.02 | Non-differentially expressed genes | 0.30 | 0.131181836 | 0.153628299 |
| <i>HOXB5</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | 0.31 | 0.131531156 | 0.154025279 |
| <i>BSN</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 10 | 0.02 | Non-differentially expressed genes | 0.29 | 0.136347649 | 0.159339731 |
| <i>CNTN1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted secreted proteins | 3 | 0.04 | 19 | 0.04 | Non-differentially expressed genes | -0.42 | 0.137495408 | 0.16056764 |
| <i>PTN</i> | 4. Others | Cancer-related genes, Predicted secreted proteins | 9 | 0.13 | 16 | 0.03 | Non-differentially expressed genes | -0.34 | 0.152879763 | 0.177337667 |
| <i>EYAI</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 4 | 0.06 | 14 | 0.03 | Non-differentially expressed genes | 0.45 | 0.155391081 | 0.180138505 |
| <i>CRMP1</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 4 | 0.06 | 16 | 0.03 | Non-differentially expressed genes | -0.25 | 0.161983325 | 0.187255892 |
| <i>CAPN9</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 13 | 0.03 | Non-differentially expressed genes | -0.38 | 0.163563888 | 0.188980372 |

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|------------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>COL12A1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | 0.31 | 0.165250369 | 0.190840086 |
| <i>TNFRSF11B</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted secreted proteins | 7 | 0.10 | 14 | 0.03 | Non-differentially expressed genes | 0.28 | 0.167291825 | 0.193077895 |
| <i>CA8</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 11 | 0.02 | Non-differentially expressed genes | 0.37 | 0.17698539 | 0.203555575 |
| <i>IQCD</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 7 | 0.01 | Non-differentially expressed genes | 0.22 | 0.178535176 | 0.205258945 |
| <i>FGF9</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted intracellular proteins, RAS pathway related proteins | 4 | 0.06 | 10 | 0.02 | Non-differentially expressed genes | 0.37 | 0.187868299 | 0.215373919 |
| <i>SP6</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 14 | 0.03 | Non-differentially expressed genes | 0.27 | 0.20578499 | 0.234541658 |
| <i>RBP1</i> | 4. Others | Predicted intracellular proteins | 7 | 0.10 | 15 | 0.03 | Non-differentially expressed genes | -0.20 | 0.236053594 | 0.267098175 |
| <i>COL4A6</i> | 4. Others | Disease related genes, Predicted secreted proteins | 5 | 0.07 | 27 | 0.05 | Non-differentially expressed genes | -0.34 | 0.242216788 | 0.273552333 |
| <i>SCUBE2</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 8 | 0.02 | Non-differentially expressed genes | 0.28 | 0.247784762 | 0.279225446 |
| <i>GDF5</i> | 4. Others | Disease related genes, Plasma | 3 | 0.04 | 12 | 0.02 | Non- | 0.28 | 0.271710458 | 0.304552107 |

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|---------------|-----------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| | | proteins, Predicted secreted proteins | | | | | differentially expressed genes | | | |
| <i>NKDI</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 13 | 0.03 | Non-differentially expressed genes | -0.27 | 0.286052982 | 0.319258622 |
| <i>HES2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 14 | 0.03 | Non-differentially expressed genes | 0.25 | 0.288085362 | 0.321382419 |
| <i>DIRAS3</i> | 4. Others | Predicted intracellular proteins | 8 | 0.12 | 16 | 0.03 | Non-differentially expressed genes | 0.26 | 0.31025021 | 0.344021769 |
| <i>HPGD</i> | 4. Others | Cancer-related genes, Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 15 | 0.03 | Non-differentially expressed genes | -0.23 | 0.353357633 | 0.388036811 |
| <i>DLGAP1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 15 | 0.03 | Non-differentially expressed genes | 0.27 | 0.374983917 | 0.409941678 |
| <i>VGLL1</i> | 4. Others | Predicted intracellular proteins | 13 | 0.19 | 19 | 0.04 | Non-differentially expressed genes | 0.27 | 0.432585974 | 0.467763226 |
| <i>FLNC</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 23 | 0.04 | Non-differentially expressed genes | 0.19 | 0.449241911 | 0.484577372 |
| <i>OLFML3</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.12 | 9 | 0.02 | Non-differentially expressed genes | -0.11 | 0.516036082 | 0.55135414 |
| <i>CXCL5</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 9 | 0.13 | 15 | 0.03 | Non-differentially expressed | -0.17 | 0.565886083 | 0.599967355 |

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|-----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | genes | | | |
| <i>REC8</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 10 | 0.02 | Non-differentially expressed genes | -0.11 | 0.579941004 | 0.613601973 |
| <i>HOPX</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 8 | 0.12 | 9 | 0.02 | Non-differentially expressed genes | -0.11 | 0.588164829 | 0.621552458 |
| <i>LPPR1</i> | 4. Others | | 4 | 0.06 | 10 | 0.02 | Non-differentially expressed genes | -0.13 | 0.630805028 | 0.662569947 |
| <i>CITED4</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | Non-differentially expressed genes | -0.06 | 0.735952849 | 0.762366682 |
| <i>KLK11</i> | 4. Others | Cancer-related genes, Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 13 | 0.03 | Non-differentially expressed genes | 0.10 | 0.754094227 | 0.77915397 |
| <i>NROB2</i> | 4. Others | Disease related genes, Nuclear receptors, Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 19 | 0.04 | Non-differentially expressed genes | 0.06 | 0.851211489 | 0.867937334 |
| <i>ACTA1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 8 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>ARL9</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>ATOH7</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>C19orf45</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CADPS</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 29 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>CPA6</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted | 2 | 0.03 | 26 | 0.05 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|-----------------|-----------|--|---|------|----|------|------|------|------|------|
| | | secreted proteins | | | | | | | | |
| <i>CR1L</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>DPEP3</i> | 4. Others | Enzymes, Predicted secreted proteins | 2 | 0.03 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>EMID2</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>EN1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>FAM184B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>FGF20</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, RAS pathway related proteins | 2 | 0.03 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>FLG</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>GBX2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 31 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>HIST1H3B</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>IFNE</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KRT78</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>LCN12</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>MMEL1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>MYOM3</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 33 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>NKX2-3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>NKX3-2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>NUDT11</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>NXPH1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|------------------|-----------|--|---|------|----|------|------|------|------|------|
| <i>OOEP</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 36 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>PPEF1</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>RAB3C</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>RBM46</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 22 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>SOX8</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SYCE2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>SYCP2L</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>TAF7L</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 31 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>TCP11</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 35 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>TPRXL</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 36 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>AK5</i> | 4. Others | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 26 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>AKNAD1</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>ALX1</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 50 | 0.10 | #N/A | #N/A | #N/A | #N/A |
| <i>ASB4</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>ATP6V1G2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>C10orf108</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>C14orf39</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 3 | 0.04 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>C6orf15</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 40 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>C8orf46</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CAPNS2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 44 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>CBLN1</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CDX2</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 38 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>CYP2C9</i> | 4. Others | Enzymes, Predicted secreted proteins | 3 | 0.04 | 35 | 0.07 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|-----------------|-----------|---|---|------|----|------|------|------|------|------|
| <i>DLX1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>DLX2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>DMRT3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 23 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>DQX1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 3 | 0.04 | 38 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>GYS2</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 3 | 0.04 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>HES7</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>KLK1</i> | 4. Others | Enzymes, Predicted secreted proteins | 3 | 0.04 | 22 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>KRTAP3-1</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 34 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>MYPN</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 3 | 0.04 | 25 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>NLRP11</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 41 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>NTF3</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.04 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>PHF21B</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>RAB3B</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>S100A5</i> | 4. Others | Predicted intracellular proteins | 3 | 0.04 | 33 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>SMPX</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 3 | 0.04 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>SPINK2</i> | 4. Others | Predicted secreted proteins | 3 | 0.04 | 13 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>TFAP2D</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.04 | 34 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>BBOX1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.06 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CYP2C8</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, | 4 | 0.06 | 10 | 0.02 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|------------------|-----------|---|---|------|----|------|------|------|------|------|
| | | Predicted secreted proteins | | | | | | | | |
| <i>ELAVL4</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 18 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>FTCD</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 4 | 0.06 | 22 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>ISL1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 47 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>PF4V1</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 4 | 0.06 | 30 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>PIWIL1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 47 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>RGS7</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.06 | 35 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>SOX30</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 4 | 0.06 | 32 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>TH</i> | 4. Others | Disease related genes, Enzymes, FDA approved drug targets, Predicted intracellular proteins | 4 | 0.06 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>TUBAL3</i> | 4. Others | Predicted intracellular proteins | 4 | 0.06 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>WNT6</i> | 4. Others | Predicted secreted proteins | 4 | 0.06 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>APOBEC1</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 41 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>C14orf105</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 48 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>C4orf26</i> | 4. Others | Disease related genes, Predicted secreted proteins | 5 | 0.07 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CALCB</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 5 | 0.07 | 49 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>CAPN14</i> | 4. Others | Enzymes, Predicted intracellular proteins | 5 | 0.07 | 19 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CREG2</i> | 4. Others | Predicted secreted proteins | 5 | 0.07 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>CSRNP3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CYP26A1</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 33 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>DIRAS2</i> | 4. Others | Predicted intracellular proteins | 5 | 0.07 | 21 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>FGF5</i> | 4. Others | Predicted secreted proteins, RAS | 5 | 0.07 | 29 | 0.06 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|-----------------|-----------|---|---|------|----|------|------|------|------|------|
| | | pathway related proteins | | | | | | | | |
| <i>HBE1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 5 | 0.07 | 43 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>KISS1</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted secreted proteins | 5 | 0.07 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>POU4F1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SIX3</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 5 | 0.07 | 28 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>SPINK13</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 32 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>UTS2</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.07 | 32 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>BEGAIN</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 11 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CCDC160</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>IL24</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.09 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>KHDC1L</i> | 4. Others | Predicted intracellular proteins | 6 | 0.09 | 45 | 0.09 | #N/A | #N/A | #N/A | #N/A |
| <i>NEFL</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 6 | 0.09 | 40 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>OLIG1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 6 | 0.09 | 23 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>TINAG</i> | 4. Others | Enzymes, Predicted intracellular proteins | 6 | 0.09 | 61 | 0.12 | #N/A | #N/A | #N/A | #N/A |
| <i>C16orf73</i> | 4. Others | Predicted intracellular proteins | 7 | 0.10 | 58 | 0.11 | #N/A | #N/A | #N/A | #N/A |
| <i>DCAF12L2</i> | 4. Others | Predicted intracellular proteins | 7 | 0.10 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SHC4</i> | 4. Others | Predicted intracellular proteins, RAS pathway related proteins | 7 | 0.10 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>TMEM155</i> | 4. Others | Predicted secreted proteins | 7 | 0.10 | 6 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>INHBE</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.12 | 30 | 0.06 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|---------------------|-----------|---|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>NEFM</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 9 | 0.13 | 39 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>ZNF804A</i> | 4. Others | Predicted intracellular proteins | 10 | 0.15 | 9 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>ELAVL2</i> | 4. Others | Predicted intracellular proteins | 12 | 0.18 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>UCA1</i> | 5. ncRNA | | 2 | 0.03 | 46 | 0.09 | Upregulated DEGs | 6.02 | 1.56E-21 | 8.75E-21 |
| <i>LOC145837</i> | 5. ncRNA | | 9 | 0.13 | 29 | 0.06 | Upregulated DEGs | 4.20 | 1.14E-18 | 5.2E-18 |
| <i>LOC254559</i> | 5. ncRNA | | 2 | 0.03 | 29 | 0.06 | Upregulated DEGs | 2.79 | 3.24E-15 | 1.16E-14 |
| <i>MEG3</i> | 5. ncRNA | | 4 | 0.06 | 26 | 0.05 | Upregulated DEGs | 2.75 | 7.26E-13 | 2.19E-12 |
| <i>H19</i> | 5. ncRNA | | 6 | 0.09 | 47 | 0.09 | Upregulated DEGs | 3.58 | 1.03E-12 | 3.06E-12 |
| <i>MIAT</i> | 5. ncRNA | | 3 | 0.04 | 10 | 0.02 | Upregulated DEGs | 1.82 | 1.14E-11 | 3.18E-11 |
| <i>LOC255167</i> | 5. ncRNA | | 2 | 0.03 | 8 | 0.02 | Upregulated DEGs | 1.33 | 0.0000807 | 0.0000143 |
| <i>C5orf27</i> | 5. ncRNA | | 2 | 0.03 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>C8orf75</i> | 5. ncRNA | | 2 | 0.03 | 13 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>LOC152225</i> | 5. ncRNA | | 3 | 0.04 | 14 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>LOC285548</i> | 5. ncRNA | | 3 | 0.04 | 21 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>PSORS1C3</i> | 5. ncRNA | | 3 | 0.04 | 16 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>MGC16121</i> | 5. ncRNA | | 4 | 0.06 | 7 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>HAR1A</i> | 5. ncRNA | | 6 | 0.09 | 12 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>LOC100127888</i> | 5. ncRNA | | 6 | 0.09 | 15 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>TCAM1P</i> | 6. pseudo | | 5 | 0.07 | 40 | 0.08 | Upregulated DEGs | 4.66 | 1.29E-17 | 5.51E-17 |
| <i>CYP2B7P1</i> | 6. pseudo | | 5 | 0.07 | 8 | 0.02 | Non-differentially expressed genes | -0.08 | 0.767896942 | 0.792096493 |
| <i>LOC440356</i> | 6. pseudo | | 2 | 0.03 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|------------------|-------------|--|----|------|----|------|------|------|------|------|
| <i>ABCA17P</i> | 6. pseudo | | 3 | 0.04 | 27 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>MYH16</i> | 6. pseudo | | 3 | 0.04 | 20 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>LOC441601</i> | 6. pseudo | | 4 | 0.06 | 17 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>PP14571</i> | 7. no found | | 13 | 0.19 | 8 | 0.02 | #N/A | #N/A | #N/A | #N/A |

2) Breast cancer

| Gene | Outlier types | Protein class from Protein Atlas database | CCLE | | TCGA | | DEGs analysis | | | |
|----------------|--|---|---------------------------|-----------|---------------------------|-----------|------------------------------------|-------|----------|---------------------------|
| | | | OL \geq 7, mZ \geq 10 | | OL \geq 7, mZ \geq 10 | | p-value <0.05, FDR <0.01, FC > 2 | | | |
| | | | No. | Frequency | No. | Frequency | DEGs | logFC | P_Value | FDR(False Discovery Rate) |
| <i>BMPRI1B</i> | 1. Kinase, Predicted membrane proteins | CD markers, Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 12 | 0.01 | Upregulated DEGs | 4.16 | 2.99E-32 | 1.64E-31 |
| <i>ERBB2</i> | 1. Kinase, Predicted membrane proteins | Cancer-related genes, CD markers, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 80 | 0.07 | Upregulated DEGs | 1.80 | 5.97E-22 | 2.13E-21 |
| <i>FGFR4</i> | 1. Kinase, Predicted membrane proteins | Cancer-related genes, CD markers, Enzymes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins, RAS pathway related proteins | 3 | 0.05 | 36 | 0.03 | Upregulated DEGs | 1.73 | 2.48E-14 | 6.28E-14 |
| <i>EPHB6</i> | 1. Kinase, Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 24 | 0.02 | Non-differentially expressed genes | -0.89 | 5.93E-09 | 1.15E-08 |
| <i>FLT3</i> | 1. Kinase, Predicted | Cancer-related genes, CD markers, Disease related genes, | 3 | 0.05 | 13 | 0.01 | Upregulated DEGs | 1.32 | 8.38E-09 | 1.61E-08 |

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|----------------|--|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | Enzymes, FDA approved drug targets, Predicted membrane proteins | | | | | | | | |
| <i>NRK</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 22 | 0.02 | Non-differentially expressed genes | 0.52 | 0.005145667 | 0.006768436 |
| <i>DCLK1</i> | 1. Kinase, Predicted membrane proteins | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.07 | 33 | 0.03 | Non-differentially expressed genes | -0.30 | 0.072114691 | 0.085523498 |
| <i>MYT1</i> | 2. Kinase | Plasma proteins, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 57 | 0.05 | Upregulated DEGs | 4.79 | 1.09E-37 | 7.12E-37 |
| <i>MYO3B</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 3 | 0.05 | 70 | 0.06 | Upregulated DEGs | 3.77 | 8.18E-24 | 3.16E-23 |
| <i>TEX14</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 3 | 0.05 | 52 | 0.05 | Upregulated DEGs | 2.69 | 4.96E-22 | 1.78E-21 |
| <i>LRRK2</i> | 2. Kinase | Cancer-related genes, Disease related genes, Enzymes, Mitochondrial proteins, Potential drug targets, Predicted intracellular proteins | 4 | 0.07 | 11 | 0.01 | Non-differentially expressed genes | -0.84 | 7.39E-12 | 1.66E-11 |
| <i>CDK12</i> | 2. Kinase | Cancer-related genes, Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 4 | 0.07 | 38 | 0.03 | Non-differentially expressed genes | 0.55 | 0.000000109 | 0.000000197 |
| <i>WNK3</i> | 2. Kinase | Enzymes, Predicted intracellular proteins | 3 | 0.05 | 21 | 0.02 | Non-differentially expressed genes | -0.43 | 0.008262977 | 0.010685119 |
| <i>RPS6KB1</i> | 2. Kinase | Enzymes, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 22 | 0.02 | Non-differentially expressed genes | 0.23 | 0.008634444 | 0.011146119 |
| <i>BRDT</i> | 2. Kinase | Predicted intracellular proteins | 2 | 0.03 | 64 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>BOC</i> | 3. Predicted membrane | Predicted intracellular proteins, Predicted membrane proteins, | 4 | 0.07 | 13 | 0.01 | Downregulated DEGs | -1.61 | 3.35E-50 | 3.24E-49 |

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|----------------|--------------------------------|---|----|------|-----|------|--------------------|-------|----------|----------|
| | proteins | Predicted secreted proteins | | | | | | | | |
| <i>RAMP1</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins | 3 | 0.05 | 22 | 0.02 | Upregulated DEGs | 2.88 | 7.13E-39 | 4.84E-38 |
| <i>KISS1R</i> | 3. Predicted membrane proteins | Disease related genes, G-protein coupled receptors, Potential drug targets, Predicted membrane proteins, Transporters | 7 | 0.12 | 37 | 0.03 | Upregulated DEGs | 4.27 | 2.72E-36 | 1.69E-35 |
| <i>ATG9B</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 24 | 0.02 | Upregulated DEGs | 2.20 | 3.12E-35 | 1.87E-34 |
| <i>CA9</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins, Predicted secreted proteins | 6 | 0.10 | 120 | 0.11 | Upregulated DEGs | 6.11 | 5.34E-32 | 2.89E-31 |
| <i>SEMA6A</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 11 | 0.01 | Downregulated DEGs | -1.34 | 8.58E-32 | 4.59E-31 |
| <i>CEACAM6</i> | 3. Predicted membrane proteins | Cancer-related genes, CD markers, Predicted intracellular proteins, Predicted membrane proteins | 10 | 0.17 | 50 | 0.05 | Upregulated DEGs | 4.20 | 6.86E-31 | 3.55E-30 |
| <i>NELL2</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 38 | 0.03 | Upregulated DEGs | 3.23 | 9.63E-31 | 4.95E-30 |
| <i>CLDN9</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 28 | 0.03 | Upregulated DEGs | 2.63 | 1.51E-30 | 7.71E-30 |
| <i>UMODL1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 32 | 0.03 | Upregulated DEGs | 3.04 | 1.37E-29 | 6.69E-29 |
| <i>TYRP1</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins, Predicted secreted proteins | 8 | 0.14 | 89 | 0.08 | Upregulated DEGs | 4.58 | 1.59E-28 | 7.45E-28 |
| <i>KCNE4</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 11 | 0.19 | 26 | 0.02 | Upregulated DEGs | 2.55 | 6.34E-27 | 2.8E-26 |
| <i>DIO1</i> | 3. Predicted | Enzymes, Predicted intracellular | 10 | 0.17 | 40 | 0.04 | Upregulated | 3.58 | 1.89E-26 | 8.19E-26 |

| | membrane proteins | proteins, Predicted membrane proteins | | | | | DEGs | | | |
|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|----------|----------|
| <i>CHRNA9</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 97 | 0.09 | Upregulated DEGs | 6.98 | 4.8E-26 | 2.05E-25 |
| <i>LETM2</i> | 3. Predicted membrane proteins | Mitochondrial proteins, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.05 | 25 | 0.02 | Upregulated DEGs | 1.72 | 3.63E-25 | 1.49E-24 |
| <i>FXYD6</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 5 | 0.09 | 18 | 0.02 | Non-differentially expressed genes | -0.99 | 1.69E-24 | 6.75E-24 |
| <i>KCNJ3</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 4 | 0.07 | 89 | 0.08 | Upregulated DEGs | 5.12 | 3.59E-24 | 1.41E-23 |
| <i>JPH3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 3 | 0.05 | 52 | 0.05 | Upregulated DEGs | 2.42 | 6.29E-24 | 2.45E-23 |
| <i>IFI27</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 22 | 0.02 | Upregulated DEGs | 1.91 | 3.12E-23 | 1.18E-22 |
| <i>KCNH2</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Plasma proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 2 | 0.03 | 56 | 0.05 | Upregulated DEGs | 2.44 | 1.12E-22 | 4.15E-22 |
| <i>UNC5A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 17 | 0.02 | Upregulated DEGs | 2.35 | 5.52E-22 | 1.97E-21 |
| <i>SSTR2</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 6 | 0.10 | 42 | 0.04 | Upregulated DEGs | 1.99 | 3.98E-20 | 1.32E-19 |
| <i>SLC2A12</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.07 | 27 | 0.02 | Downregulated DEGs | -1.05 | 6.07E-20 | 1.99E-19 |
| <i>SLC1A1</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 43 | 0.04 | Upregulated DEGs | 2.27 | 1.36E-19 | 4.39E-19 |

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|-----------------|--------------------------------|---|---|------|-----|------|------------------|------|----------|----------|
| <i>ROBO2</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.07 | 61 | 0.06 | Upregulated DEGs | 2.96 | 1.97E-19 | 6.33E-19 |
| <i>KIAA1644</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.12 | 20 | 0.02 | Upregulated DEGs | 1.67 | 2.4E-19 | 7.68E-19 |
| <i>CLEC7A</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 20 | 0.02 | Upregulated DEGs | 1.32 | 3.49E-19 | 1.11E-18 |
| <i>LAMP3</i> | 3. Predicted membrane proteins | CD markers, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.07 | 24 | 0.02 | Upregulated DEGs | 1.83 | 5.15E-19 | 1.62E-18 |
| <i>STARD3</i> | 3. Predicted membrane proteins | Cancer-related genes, Predicted membrane proteins, Transporters | 4 | 0.07 | 73 | 0.07 | Upregulated DEGs | 1.23 | 1.73E-18 | 5.35E-18 |
| <i>PGAP3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 7 | 0.12 | 72 | 0.07 | Upregulated DEGs | 1.31 | 1E-17 | 2.98E-17 |
| <i>GABBR2</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins, Transporters | 2 | 0.03 | 155 | 0.14 | Upregulated DEGs | 3.94 | 4.14E-17 | 1.19E-16 |
| <i>TMEM158</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.12 | 29 | 0.03 | Upregulated DEGs | 1.55 | 1.25E-16 | 3.54E-16 |
| <i>SIRPG</i> | 3. Predicted membrane proteins | CD markers, Predicted membrane proteins | 2 | 0.03 | 12 | 0.01 | Upregulated DEGs | 1.62 | 3.45E-16 | 9.56E-16 |
| <i>UPK1A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.12 | 95 | 0.09 | Upregulated DEGs | 2.91 | 6.81E-16 | 1.86E-15 |
| <i>SLITRK6</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 4 | 0.07 | 57 | 0.05 | Upregulated DEGs | 2.43 | 1.05E-15 | 2.82E-15 |
| <i>FAM155A</i> | 3. Predicted | Predicted membrane proteins | 2 | 0.03 | 16 | 0.01 | Upregulated | 1.50 | 4.36E-15 | 1.15E-14 |

| | membrane proteins | | | | | | DEGs | | | |
|-----------------|--------------------------------|---|---|------|----|------|------------------------------------|-------|----------|----------|
| <i>ACSL6</i> | 3. Predicted membrane proteins | Cancer-related genes, Disease related genes, Enzymes, Mitochondrial proteins, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 53 | 0.05 | Upregulated DEGs | 1.72 | 5.35E-15 | 1.4E-14 |
| <i>CYP39A1</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 3 | 0.05 | 11 | 0.01 | Downregulated DEGs | -1.26 | 5.35E-15 | 1.4E-14 |
| <i>NLGN4X</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 2 | 0.03 | 18 | 0.02 | Downregulated DEGs | -1.17 | 1.1E-14 | 2.84E-14 |
| <i>KCNQ3</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 2 | 0.03 | 19 | 0.02 | Upregulated DEGs | 1.23 | 7.64E-14 | 1.9E-13 |
| <i>MOXD1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 7 | 0.12 | 13 | 0.01 | Upregulated DEGs | 1.11 | 9.08E-14 | 2.25E-13 |
| <i>ST8SIA1</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 12 | 0.01 | Downregulated DEGs | -1.00 | 1.07E-13 | 2.63E-13 |
| <i>OSTalpha</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins, Transporters | 3 | 0.05 | 33 | 0.03 | Upregulated DEGs | 1.13 | 2.65E-13 | 6.42E-13 |
| <i>MED24</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 46 | 0.04 | Non-differentially expressed genes | 0.77 | 3.88E-13 | 9.3E-13 |
| <i>GP2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.07 | 46 | 0.04 | Upregulated DEGs | 2.62 | 8.67E-13 | 2.04E-12 |
| <i>NCAM2</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 2 | 0.03 | 11 | 0.01 | Upregulated DEGs | 1.50 | 2.47E-12 | 5.69E-12 |

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|----------------|--------------------------------|---|---|------|-----|------|------------------------------------|-------|----------|-------------|
| <i>MRAP2</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 2 | 0.03 | 19 | 0.02 | Downregulated DEGs | -1.13 | 3.36E-12 | 7.68E-12 |
| <i>CEACAM7</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 4 | 0.07 | 45 | 0.04 | Upregulated DEGs | 1.95 | 3.58E-12 | 8.17E-12 |
| <i>TMEM86A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 15 | 0.01 | Non-differentially expressed genes | 0.83 | 5.09E-12 | 1.15E-11 |
| <i>SLCIA6</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transporters | 5 | 0.09 | 122 | 0.11 | Upregulated DEGs | 4.15 | 1.27E-11 | 2.81E-11 |
| <i>ADCY5</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 15 | 0.01 | Downregulated DEGs | -1.21 | 1.68E-11 | 3.72E-11 |
| <i>NFASC</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 7 | 0.12 | 13 | 0.01 | Non-differentially expressed genes | -0.95 | 2.03E-11 | 4.47E-11 |
| <i>EMR1</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted intracellular proteins, Predicted membrane proteins, Transporters | 5 | 0.09 | 14 | 0.01 | Non-differentially expressed genes | 0.97 | 2.19E-11 | 4.8E-11 |
| <i>P2RY10</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 3 | 0.05 | 13 | 0.01 | Upregulated DEGs | 1.23 | 2.57E-11 | 5.63E-11 |
| <i>ELOVL2</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 6 | 0.10 | 13 | 0.01 | Upregulated DEGs | 1.62 | 5.15E-11 | 1.11E-10 |
| <i>PTPRN2</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 47 | 0.04 | Upregulated DEGs | 1.47 | 7.49E-11 | 1.6E-10 |
| <i>SUSD2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 20 | 0.02 | Upregulated DEGs | 1.07 | 1.5E-10 | 3.16E-10 |
| <i>IL12RB2</i> | 3. Predicted | Predicted intracellular proteins, | 2 | 0.03 | 88 | 0.08 | Upregulated | 1.66 | 9.95E-10 | 0.000000002 |

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|-----------------|--------------------------------|---|----|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | Predicted membrane proteins, Predicted secreted proteins | | | | | DEGs | | | |
| <i>LYNX1</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins, Transporters | 2 | 0.03 | 12 | 0.01 | Non-differentially expressed genes | -0.82 | 2.81E-09 | 5.52E-09 |
| <i>NPY1R</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted intracellular proteins, Predicted membrane proteins | 7 | 0.12 | 91 | 0.08 | Upregulated DEGs | 1.72 | 3.25E-08 | 6.05E-08 |
| <i>SLC37A2</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transporters | 2 | 0.03 | 20 | 0.02 | Non-differentially expressed genes | 0.69 | 5.01E-08 | 9.21E-08 |
| <i>C1orf186</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 59 | 0.05 | Upregulated DEGs | 1.41 | 0.000000108 | 0.000000196 |
| <i>KCNK5</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters, Voltage-gated ion channels | 3 | 0.05 | 42 | 0.04 | Upregulated DEGs | 1.07 | 0.000000126 | 0.000000226 |
| <i>GJB3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 9 | 0.16 | 66 | 0.06 | Upregulated DEGs | 1.39 | 0.000000207 | 0.000000365 |
| <i>ATRNL1</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 59 | 0.05 | Upregulated DEGs | 1.36 | 0.000000404 | 0.000000701 |
| <i>C11orf41</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 18 | 0.02 | Non-differentially expressed genes | 0.71 | 0.000000712 | 0.00000122 |
| <i>IL1R2</i> | 3. Predicted membrane proteins | Cancer-related genes, CD markers, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 25 | 0.02 | Upregulated DEGs | 1.18 | 0.000000773 | 0.00000132 |
| <i>UNC5C</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 16 | 0.01 | Non-differentially expressed genes | -0.73 | 0.000000889 | 0.00000151 |
| <i>GJA1</i> | 3. Predicted | Cancer-related genes, Disease | 12 | 0.21 | 33 | 0.03 | Non- | 0.82 | 0.000000905 | 0.00000154 |

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|----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|------------|-------------|
| | membrane proteins | related genes, Predicted membrane proteins | | | | | differentially expressed genes | | | |
| <i>PCDHB6</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 6 | 0.10 | 31 | 0.03 | Non-differentially expressed genes | -0.71 | 0.00000164 | 0.00000274 |
| <i>TMC8</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted intracellular proteins, Predicted membrane proteins, Transporters | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | 0.62 | 0.00000267 | 0.00000441 |
| <i>GRPR</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 5 | 0.09 | 15 | 0.01 | Upregulated DEGs | 1.22 | 0.00000527 | 0.00000856 |
| <i>MAOB</i> | 3. Predicted membrane proteins | Enzymes, FDA approved drug targets, Mitochondrial proteins, Predicted membrane proteins | 4 | 0.07 | 16 | 0.01 | Non-differentially expressed genes | -0.76 | 0.0000127 | 0.0000201 |
| <i>SHISA2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 35 | 0.03 | Non-differentially expressed genes | 1.00 | 0.000014 | 0.0000221 |
| <i>MS4A7</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 22 | 0.02 | Non-differentially expressed genes | 0.65 | 0.0000179 | 0.000028 |
| <i>TMEM156</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.07 | 34 | 0.03 | Non-differentially expressed genes | 0.79 | 0.0000254 | 0.0000393 |
| <i>TMEM40</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 18 | 0.02 | Upregulated DEGs | 1.03 | 0.0000273 | 0.0000422 |
| <i>TMEM27</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.07 | 13 | 0.01 | Non-differentially expressed genes | -0.50 | 0.0000394 | 0.0000603 |
| <i>CYP4Z1</i> | 3. Predicted | Enzymes, Predicted membrane | 8 | 0.14 | 67 | 0.06 | Upregulated | 1.32 | 0.0000863 | 0.000129182 |

| | membrane proteins | proteins | | | | | DEGs | | | |
|-----------------|--------------------------------|---|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>ACER3</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 13 | 0.01 | Non-differentially expressed genes | -0.36 | 0.000128208 | 0.000189481 |
| <i>PCDH20</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 7 | 0.12 | 24 | 0.02 | Non-differentially expressed genes | 0.78 | 0.000254807 | 0.000369148 |
| <i>STEAP4</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 10 | 0.17 | 44 | 0.04 | Non-differentially expressed genes | -0.64 | 0.00026584 | 0.000384833 |
| <i>CPT1C</i> | 3. Predicted membrane proteins | Enzymes, Mitochondrial proteins, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 13 | 0.01 | Non-differentially expressed genes | 0.40 | 0.000457699 | 0.000651424 |
| <i>PDZK1IP1</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.07 | 16 | 0.01 | Non-differentially expressed genes | 0.63 | 0.000950924 | 0.001320969 |
| <i>PROM1</i> | 3. Predicted membrane proteins | CD markers, Disease related genes, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 24 | 0.02 | Non-differentially expressed genes | -0.72 | 0.001174615 | 0.001619023 |
| <i>CECR6</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 33 | 0.03 | Non-differentially expressed genes | 0.45 | 0.001228634 | 0.001690663 |
| <i>PCDHB8</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 4 | 0.07 | 28 | 0.03 | Non-differentially expressed genes | 0.56 | 0.001424817 | 0.001951246 |
| <i>PCDHB5</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 9 | 0.16 | 52 | 0.05 | Non-differentially expressed | -0.49 | 0.001895427 | 0.002572081 |

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|---------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | genes | | | |
| <i>LRAT</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 11 | 0.01 | Non-differentially expressed genes | -0.55 | 0.002188283 | 0.002955214 |
| <i>GABRB3</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 26 | 0.02 | Non-differentially expressed genes | 0.77 | 0.002420767 | 0.003259129 |
| <i>WNT10A</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 5 | 0.09 | 33 | 0.03 | Non-differentially expressed genes | 0.55 | 0.002946168 | 0.003942961 |
| <i>SCNN1G</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted membrane proteins, Transporters | 7 | 0.12 | 25 | 0.02 | Non-differentially expressed genes | 0.64 | 0.003427524 | 0.004566666 |
| <i>RNF182</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.07 | 93 | 0.08 | Non-differentially expressed genes | 0.61 | 0.007352596 | 0.009552666 |
| <i>IGDCC3</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 36 | 0.03 | Non-differentially expressed genes | 0.69 | 0.010742778 | 0.013754487 |
| <i>MAL</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 8 | 0.14 | 29 | 0.03 | Non-differentially expressed genes | 0.52 | 0.01195012 | 0.015230906 |
| <i>RNF183</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 5 | 0.09 | 35 | 0.03 | Non-differentially expressed genes | 0.51 | 0.029364251 | 0.036076703 |
| <i>PCDH19</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 3 | 0.05 | 46 | 0.04 | Non-differentially expressed genes | -0.40 | 0.030449229 | 0.037357309 |
| <i>ABCA4</i> | 3. Predicted | Disease related genes, Plasma | 5 | 0.09 | 32 | 0.03 | Non- | 0.43 | 0.033311107 | 0.040714182 |

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|-----------------|--------------------------------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | membrane proteins | proteins, Potential drug targets, Predicted membrane proteins, Transporters | | | | | differentially expressed genes | | | |
| <i>PCDHB3</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 46 | 0.04 | Non-differentially expressed genes | -0.30 | 0.048498774 | 0.058357618 |
| <i>GJB5</i> | 3. Predicted membrane proteins | Cancer-related genes, Predicted membrane proteins | 8 | 0.14 | 39 | 0.04 | Non-differentially expressed genes | 0.40 | 0.078196972 | 0.092390917 |
| <i>KCND2</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins, Transporters, Voltage-gated ion channels | 4 | 0.07 | 20 | 0.02 | Non-differentially expressed genes | 0.29 | 0.085451122 | 0.100531128 |
| <i>WDR17</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 18 | 0.02 | Non-differentially expressed genes | -0.34 | 0.085625128 | 0.100727886 |
| <i>NAV3</i> | 3. Predicted membrane proteins | Cancer-related genes, Disease related genes, Predicted intracellular proteins, Predicted membrane proteins | 8 | 0.14 | 32 | 0.03 | Non-differentially expressed genes | -0.29 | 0.107197065 | 0.124793707 |
| <i>NRXN3</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 23 | 0.02 | Non-differentially expressed genes | 0.27 | 0.113684985 | 0.1320679 |
| <i>DSCAML1</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 41 | 0.04 | Non-differentially expressed genes | 0.30 | 0.16177104 | 0.18467393 |
| <i>TMEM176A</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 6 | 0.10 | 12 | 0.01 | Non-differentially expressed genes | 0.17 | 0.184210729 | 0.208786179 |
| <i>BAI1</i> | 3. Predicted membrane | Cancer-related genes, G-protein coupled receptors, Plasma | 2 | 0.03 | 23 | 0.02 | Non-differentially | -0.18 | 0.325770195 | 0.35637546 |

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|---------------|--------------------------------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | proteins | proteins, Predicted membrane proteins | | | | | expressed genes | | | |
| <i>DUOX1</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins, Predicted secreted proteins, Transporters | 3 | 0.05 | 15 | 0.01 | Non-differentially expressed genes | -0.16 | 0.329733864 | 0.360552602 |
| <i>TMEM61</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 13 | 0.01 | Non-differentially expressed genes | -0.14 | 0.365712998 | 0.396864156 |
| <i>FZD10</i> | 3. Predicted membrane proteins | CD markers, G-protein coupled receptors, Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 29 | 0.03 | Non-differentially expressed genes | 0.14 | 0.372432207 | 0.403479512 |
| <i>FAM3B</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 64 | 0.06 | Non-differentially expressed genes | -0.18 | 0.447096533 | 0.478210907 |
| <i>LSAMP</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 4 | 0.07 | 14 | 0.01 | Non-differentially expressed genes | -0.12 | 0.489147003 | 0.520267771 |
| <i>FLRT3</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins | 2 | 0.03 | 21 | 0.02 | Non-differentially expressed genes | 0.13 | 0.494417102 | 0.525390932 |
| <i>PTGER2</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 3 | 0.05 | 28 | 0.03 | Non-differentially expressed genes | -0.10 | 0.519269145 | 0.549681951 |
| <i>LRP2</i> | 3. Predicted membrane proteins | Disease related genes, Plasma proteins, Predicted membrane proteins, Predicted secreted proteins | 8 | 0.14 | 22 | 0.02 | Non-differentially expressed genes | 0.15 | 0.533971108 | 0.563882274 |
| <i>SCNN1B</i> | 3. Predicted membrane proteins | Disease related genes, FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins, Transporters | 2 | 0.03 | 23 | 0.02 | Non-differentially expressed genes | 0.09 | 0.615544899 | 0.643636184 |

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|---------------|--------------------------------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>ADRA2C</i> | 3. Predicted membrane proteins | FDA approved drug targets, G-protein coupled receptors, Predicted membrane proteins | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | 0.06 | 0.732966646 | 0.755594397 |
| <i>FZD8</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 2 | 0.03 | 19 | 0.02 | Non-differentially expressed genes | -0.03 | 0.827646416 | 0.843851447 |
| <i>MEGF10</i> | 3. Predicted membrane proteins | Disease related genes, Predicted membrane proteins, Predicted secreted proteins | 2 | 0.03 | 40 | 0.04 | Non-differentially expressed genes | -0.04 | 0.832055339 | 0.848056404 |
| <i>CYP4B1</i> | 3. Predicted membrane proteins | Enzymes, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 36 | 0.03 | Non-differentially expressed genes | 0.04 | 0.854218619 | 0.868743369 |
| <i>TPCN2</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters, Voltage-gated ion channels | 2 | 0.03 | 13 | 0.01 | Non-differentially expressed genes | 0.00 | 0.996801293 | 0.99727003 |
| <i>CDH26</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted intracellular proteins, Predicted membrane proteins | 2 | 0.03 | 30 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CDH7</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 76 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>DUOX2</i> | 3. Predicted membrane proteins | Disease related genes, Enzymes, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 36 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>GJA3</i> | 3. Predicted membrane proteins | Disease related genes, Potential drug targets, Predicted membrane proteins, Transporters | 2 | 0.03 | 18 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>KLRC3</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 31 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>NOX5</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |

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|-----------------|--------------------------------|---|---|------|-----|------|------|------|------|------|
| <i>PCDHA9</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins | 2 | 0.03 | 18 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC38A11</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 2 | 0.03 | 12 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>SOAT2</i> | 3. Predicted membrane proteins | Enzymes, Predicted membrane proteins | 2 | 0.03 | 18 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>UPK2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 2 | 0.03 | 39 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CCKBR</i> | 3. Predicted membrane proteins | Cancer-related genes, FDA approved drug targets, G-protein coupled receptors, Predicted intracellular proteins, Predicted membrane proteins | 3 | 0.05 | 116 | 0.11 | #N/A | #N/A | #N/A | #N/A |
| <i>IL19</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 84 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>KCNK12</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Voltage-gated ion channels | 3 | 0.05 | 26 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC12A5</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted membrane proteins, Transporters | 3 | 0.05 | 42 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC39A2</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 3 | 0.05 | 23 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC6A16</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins, Transporters | 3 | 0.05 | 13 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>UPK3B</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Predicted secreted proteins | 3 | 0.05 | 38 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CALHM3</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 4 | 0.07 | 25 | 0.02 | #N/A | #N/A | #N/A | #N/A |

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|----------------|--------------------------------|---|----|------|----|------|------------------|------|----------|----------|
| <i>CCR10</i> | 3. Predicted membrane proteins | Cancer-related genes, G-protein coupled receptors, Plasma proteins, Predicted membrane proteins | 4 | 0.07 | 11 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>GABRA5</i> | 3. Predicted membrane proteins | FDA approved drug targets, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 4 | 0.07 | 80 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>GPR115</i> | 3. Predicted membrane proteins | G-protein coupled receptors, Predicted membrane proteins | 4 | 0.07 | 55 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>GRIK2</i> | 3. Predicted membrane proteins | Disease related genes, Predicted intracellular proteins, Predicted membrane proteins, Predicted secreted proteins | 5 | 0.09 | 34 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>TMEM171</i> | 3. Predicted membrane proteins | Predicted membrane proteins | 5 | 0.09 | 43 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>HRK</i> | 3. Predicted membrane proteins | Predicted intracellular proteins, Predicted membrane proteins | 6 | 0.10 | 48 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>SLC10A4</i> | 3. Predicted membrane proteins | Predicted membrane proteins, Transporters | 6 | 0.10 | 27 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>TRPC4</i> | 3. Predicted membrane proteins | Plasma proteins, Predicted membrane proteins, Voltage-gated ion channels | 6 | 0.10 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>TPTE</i> | 3. Predicted membrane proteins | Enzymes, Plasma proteins, Predicted membrane proteins | 9 | 0.16 | 43 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>TDO2</i> | 4. Others | Enzymes, Predicted intracellular proteins | 8 | 0.14 | 20 | 0.02 | Upregulated DEGs | 4.28 | 2.79E-66 | 4.12E-65 |
| <i>CCDC78</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 12 | 0.01 | Upregulated DEGs | 3.81 | 6.23E-65 | 8.89E-64 |
| <i>MMP1</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Enzymes, FDA approved drug targets, Plasma proteins, | 13 | 0.22 | 53 | 0.05 | Upregulated DEGs | 6.68 | 1.68E-64 | 2.37E-63 |

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|-----------------|-----------|---|---|------|----|------|------------------|------|----------|----------|
| | | Predicted secreted proteins | | | | | | | | |
| <i>CDC6</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 17 | 0.02 | Upregulated DEGs | 2.96 | 3.89E-64 | 5.42E-63 |
| <i>CST4</i> | 4. Others | Predicted secreted proteins | 4 | 0.07 | 83 | 0.08 | Upregulated DEGs | 8.50 | 4.17E-57 | 4.92E-56 |
| <i>CST2</i> | 4. Others | Predicted secreted proteins | 5 | 0.09 | 17 | 0.02 | Upregulated DEGs | 5.38 | 2.21E-53 | 2.36E-52 |
| <i>CXCL11</i> | 4. Others | Predicted secreted proteins | 6 | 0.10 | 17 | 0.02 | Upregulated DEGs | 3.70 | 2.46E-52 | 2.52E-51 |
| <i>ITPKA</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 16 | 0.01 | Upregulated DEGs | 3.71 | 1.56E-51 | 1.57E-50 |
| <i>CXCL10</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 3 | 0.05 | 24 | 0.02 | Upregulated DEGs | 3.52 | 8.3E-51 | 8.16E-50 |
| <i>HAPLN1</i> | 4. Others | Predicted secreted proteins | 9 | 0.16 | 32 | 0.03 | Upregulated DEGs | 5.39 | 1.61E-49 | 1.52E-48 |
| <i>C9orf169</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 24 | 0.02 | Upregulated DEGs | 3.09 | 1.25E-47 | 1.13E-46 |
| <i>VEGF</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 3 | 0.05 | 53 | 0.05 | Upregulated DEGs | 5.19 | 1.65E-46 | 1.44E-45 |
| <i>CCNE1</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 3 | 0.05 | 34 | 0.03 | Upregulated DEGs | 2.95 | 3.37E-46 | 2.91E-45 |
| <i>DQX1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 29 | 0.03 | Upregulated DEGs | 4.44 | 1.01E-45 | 8.63E-45 |
| <i>CAPS</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 16 | 0.01 | Upregulated DEGs | 2.70 | 1.17E-44 | 9.65E-44 |
| <i>FBN2</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.12 | 26 | 0.02 | Upregulated DEGs | 3.34 | 4.81E-44 | 3.87E-43 |
| <i>ACAN</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.07 | 35 | 0.03 | Upregulated DEGs | 4.39 | 4.33E-41 | 3.16E-40 |
| <i>SYT13</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 38 | 0.03 | Upregulated DEGs | 4.95 | 7.83E-40 | 5.49E-39 |
| <i>ACTL8</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 2 | 0.03 | 90 | 0.08 | Upregulated DEGs | 7.92 | 4.33E-38 | 2.86E-37 |
| <i>OASL</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 13 | 0.01 | Upregulated | 2.34 | 4.8E-38 | 3.17E-37 |

| | | | | | | | DEGs | | | |
|----------------|-----------|--|---|------|-----|------|--------------------|-------|----------|----------|
| <i>LYPD1</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 23 | 0.02 | Upregulated DEGs | 2.14 | 7.47E-38 | 4.9E-37 |
| <i>ERMN</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 3 | 0.05 | 13 | 0.01 | Upregulated DEGs | 2.51 | 1.02E-37 | 6.64E-37 |
| <i>UNC13A</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 66 | 0.06 | Upregulated DEGs | 4.14 | 4.09E-37 | 2.62E-36 |
| <i>A2M</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 6 | 0.10 | 14 | 0.01 | Downregulated DEGs | -1.11 | 1.53E-36 | 9.63E-36 |
| <i>KLHL35</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 12 | 0.01 | Upregulated DEGs | 1.99 | 3.49E-34 | 2.04E-33 |
| <i>CBLN2</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.09 | 130 | 0.12 | Upregulated DEGs | 6.20 | 8.61E-34 | 4.97E-33 |
| <i>CAPSL</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 41 | 0.04 | Upregulated DEGs | 4.37 | 4.1E-33 | 2.32E-32 |
| <i>EDN2</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 19 | 0.02 | Upregulated DEGs | 2.54 | 4.35E-33 | 2.46E-32 |
| <i>ELAVL2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 26 | 0.02 | Upregulated DEGs | 2.69 | 9.92E-33 | 5.51E-32 |
| <i>SPOCD1</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 13 | 0.01 | Upregulated DEGs | 2.20 | 1.19E-32 | 6.57E-32 |
| <i>NPW</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.12 | 75 | 0.07 | Upregulated DEGs | 4.55 | 3.47E-32 | 1.89E-31 |
| <i>CADPS</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 23 | 0.02 | Upregulated DEGs | 3.60 | 3.78E-32 | 2.06E-31 |
| <i>CAPN9</i> | 4. Others | Enzymes, Predicted intracellular proteins | 4 | 0.07 | 19 | 0.02 | Upregulated DEGs | 3.09 | 6.33E-32 | 3.41E-31 |
| <i>SCUBE3</i> | 4. Others | Predicted secreted proteins | 4 | 0.07 | 36 | 0.03 | Upregulated DEGs | 3.10 | 7.09E-32 | 3.81E-31 |
| <i>CCDC151</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 4 | 0.07 | 18 | 0.02 | Upregulated DEGs | 2.58 | 8.54E-32 | 4.57E-31 |
| <i>HOXB9</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 62 | 0.06 | Upregulated DEGs | 2.64 | 3.7E-30 | 1.86E-29 |
| <i>ABP1</i> | 4. Others | Enzymes, Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.14 | 68 | 0.06 | Upregulated DEGs | 3.73 | 6.41E-30 | 3.18E-29 |

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|----------------|-----------|--|---|------|-----|------|------------------|------|----------|----------|
| <i>HHIPL2</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 42 | 0.04 | Upregulated DEGs | 3.50 | 1.08E-29 | 5.33E-29 |
| <i>CST6</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 5 | 0.09 | 25 | 0.02 | Upregulated DEGs | 2.62 | 1.74E-29 | 8.47E-29 |
| <i>INSM1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 6 | 0.10 | 94 | 0.09 | Upregulated DEGs | 5.29 | 1.78E-29 | 8.7E-29 |
| <i>CHST6</i> | 4. Others | Disease related genes, Predicted secreted proteins | 4 | 0.07 | 21 | 0.02 | Upregulated DEGs | 2.07 | 2.31E-28 | 1.08E-27 |
| <i>DLX4</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 14 | 0.01 | Upregulated DEGs | 2.03 | 7.29E-28 | 3.33E-27 |
| <i>PSMD3</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 64 | 0.06 | Upregulated DEGs | 1.41 | 8.86E-27 | 3.89E-26 |
| <i>DLX5</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 4 | 0.07 | 78 | 0.07 | Upregulated DEGs | 2.57 | 1.45E-26 | 6.31E-26 |
| <i>ZBED2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 6 | 0.10 | 16 | 0.01 | Upregulated DEGs | 2.53 | 1.58E-26 | 6.88E-26 |
| <i>KIF1A</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 5 | 0.09 | 112 | 0.10 | Upregulated DEGs | 4.64 | 2.62E-26 | 1.13E-25 |
| <i>CEACAM5</i> | 4. Others | Cancer-related genes, CD markers, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 8 | 0.14 | 78 | 0.07 | Upregulated DEGs | 4.33 | 5.66E-26 | 2.41E-25 |
| <i>CGA</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted secreted proteins | 7 | 0.12 | 152 | 0.14 | Upregulated DEGs | 8.85 | 1.07E-25 | 4.49E-25 |
| <i>PVALB</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 109 | 0.10 | Upregulated DEGs | 5.04 | 2.78E-25 | 1.15E-24 |
| <i>MAEL</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 55 | 0.05 | Upregulated DEGs | 5.32 | 3.44E-25 | 1.41E-24 |
| <i>ORM1</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 3 | 0.05 | 85 | 0.08 | Upregulated DEGs | 5.43 | 4.55E-25 | 1.86E-24 |
| <i>KLHDC7B</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 63 | 0.06 | Upregulated DEGs | 2.77 | 8.7E-25 | 3.52E-24 |
| <i>PRAME</i> | 4. Others | Plasma proteins, Predicted | 3 | 0.05 | 39 | 0.04 | Upregulated | 4.82 | 9.68E-25 | 3.91E-24 |

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|-----------------|-----------|---|---|------|-----|------|------------------------------------|-------|----------|----------|
| | | intracellular proteins | | | | | DEGs | | | |
| <i>NPAS3</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 12 | 0.01 | Downregulated DEGs | -1.25 | 9.72E-25 | 3.92E-24 |
| <i>GAD1</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 93 | 0.08 | Upregulated DEGs | 3.69 | 1.13E-24 | 4.56E-24 |
| <i>RUNDC3A</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 86 | 0.08 | Upregulated DEGs | 3.54 | 1.51E-24 | 6.05E-24 |
| <i>VSTM2L</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 31 | 0.03 | Upregulated DEGs | 2.64 | 1.87E-24 | 7.42E-24 |
| <i>SOX11</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 3 | 0.05 | 113 | 0.10 | Upregulated DEGs | 2.87 | 2.11E-24 | 8.38E-24 |
| <i>AKR7A3</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 15 | 0.01 | Upregulated DEGs | 2.56 | 2.16E-24 | 8.57E-24 |
| <i>NPTX2</i> | 4. Others | Predicted secreted proteins | 4 | 0.07 | 21 | 0.02 | Upregulated DEGs | 2.54 | 3.33E-24 | 1.31E-23 |
| <i>HOXB13</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 6 | 0.10 | 13 | 0.01 | Upregulated DEGs | 5.60 | 5.2E-24 | 2.03E-23 |
| <i>IL20</i> | 4. Others | Predicted secreted proteins | 6 | 0.10 | 44 | 0.04 | Upregulated DEGs | 3.54 | 1.45E-23 | 5.55E-23 |
| <i>SERPINB7</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 6 | 0.10 | 64 | 0.06 | Upregulated DEGs | 3.81 | 6.62E-23 | 2.47E-22 |
| <i>PCGF2</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 18 | 0.02 | Non-differentially expressed genes | 0.99 | 7.3E-23 | 2.72E-22 |
| <i>BTBD11</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 12 | 0.01 | Downregulated DEGs | -1.19 | 7.83E-23 | 2.92E-22 |
| <i>AIM2</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 21 | 0.02 | Upregulated DEGs | 2.14 | 1.1E-22 | 4.08E-22 |
| <i>MX1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 11 | 0.01 | Upregulated DEGs | 1.71 | 1.43E-22 | 5.26E-22 |
| <i>TNNI3</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted | 3 | 0.05 | 44 | 0.04 | Upregulated DEGs | 4.06 | 1.52E-22 | 5.58E-22 |

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|-----------------|-----------|--|---|------|-----|------|------------------------------------|-------|----------|----------|
| | | intracellular proteins | | | | | | | | |
| <i>CHST1</i> | 4. Others | Enzymes, Predicted secreted proteins | 4 | 0.07 | 33 | 0.03 | Upregulated DEGs | 1.99 | 1.62E-22 | 5.94E-22 |
| <i>INHA</i> | 4. Others | Predicted secreted proteins | 3 | 0.05 | 31 | 0.03 | Upregulated DEGs | 2.25 | 6.04E-22 | 2.16E-21 |
| <i>LCN12</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 25 | 0.02 | Upregulated DEGs | 2.09 | 2.34E-21 | 8.17E-21 |
| <i>CCL20</i> | 4. Others | Predicted secreted proteins | 5 | 0.09 | 49 | 0.04 | Upregulated DEGs | 2.63 | 2.86E-21 | 9.91E-21 |
| <i>S100A8</i> | 4. Others | Cancer-related genes, Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 110 | 0.10 | Upregulated DEGs | 3.64 | 4.45E-21 | 1.53E-20 |
| <i>GNG4</i> | 4. Others | Predicted intracellular proteins, RAS pathway related proteins | 4 | 0.07 | 93 | 0.08 | Upregulated DEGs | 2.78 | 4.9E-21 | 1.68E-20 |
| <i>APOBEC3A</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 26 | 0.02 | Upregulated DEGs | 1.91 | 8.11E-21 | 2.76E-20 |
| <i>GAL</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 81 | 0.07 | Upregulated DEGs | 2.89 | 1.2E-20 | 4.04E-20 |
| <i>KRT75</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 76 | 0.07 | Upregulated DEGs | 4.64 | 1.52E-20 | 5.12E-20 |
| <i>CISD3</i> | 4. Others | Mitochondrial proteins, Predicted intracellular proteins | 3 | 0.05 | 14 | 0.01 | Non-differentially expressed genes | 0.95 | 1.91E-20 | 6.37E-20 |
| <i>SNCAIP</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 16 | 0.01 | Downregulated DEGs | -1.16 | 4.42E-20 | 1.46E-19 |
| <i>ECM1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 45 | 0.04 | Upregulated DEGs | 1.79 | 8.25E-20 | 2.69E-19 |
| <i>KRT86</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 8 | 0.14 | 61 | 0.06 | Upregulated DEGs | 2.63 | 1.3E-19 | 4.21E-19 |
| <i>S100A9</i> | 4. Others | Cancer-related genes, Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 107 | 0.10 | Upregulated DEGs | 3.06 | 3.52E-19 | 1.12E-18 |
| <i>L3MBTL4</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 19 | 0.02 | Downregulated DEGs | -1.25 | 5.41E-19 | 1.7E-18 |

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|----------------|-----------|---|---|------|-----|------|------------------|------|----------|----------|
| | | | | | | | d DEGs | | | |
| <i>FAM83A</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 79 | 0.07 | Upregulated DEGs | 2.78 | 6.9E-19 | 2.16E-18 |
| <i>SBSN</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 127 | 0.12 | Upregulated DEGs | 4.75 | 8.31E-19 | 2.59E-18 |
| <i>TFF3</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.07 | 24 | 0.02 | Upregulated DEGs | 2.50 | 1.71E-18 | 5.26E-18 |
| <i>CASP14</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 145 | 0.13 | Upregulated DEGs | 6.71 | 1.77E-18 | 5.44E-18 |
| <i>COL9A3</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.10 | 71 | 0.06 | Upregulated DEGs | 2.66 | 2.84E-18 | 8.65E-18 |
| <i>A2ML1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.07 | 140 | 0.13 | Upregulated DEGs | 3.95 | 2.95E-18 | 8.98E-18 |
| <i>LRRC10B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 17 | 0.02 | Upregulated DEGs | 1.68 | 9.69E-18 | 2.88E-17 |
| <i>NKX2-2</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 7 | 0.12 | 159 | 0.14 | Upregulated DEGs | 5.48 | 1.44E-17 | 4.25E-17 |
| <i>MUC5B</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 33 | 0.03 | Upregulated DEGs | 2.73 | 1.58E-17 | 4.65E-17 |
| <i>HPDL</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 48 | 0.04 | Upregulated DEGs | 1.88 | 4.87E-17 | 1.4E-16 |
| <i>TGM3</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 46 | 0.04 | Upregulated DEGs | 2.49 | 6.56E-17 | 1.88E-16 |
| <i>MESP2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 18 | 0.02 | Upregulated DEGs | 1.56 | 9.21E-17 | 2.63E-16 |
| <i>QPCT</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 41 | 0.04 | Upregulated DEGs | 1.24 | 1.19E-16 | 3.36E-16 |
| <i>DNAH11</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 70 | 0.06 | Upregulated DEGs | 2.66 | 1.19E-16 | 3.37E-16 |
| <i>SIX3</i> | 4. Others | Disease related genes, Predicted | 6 | 0.10 | 97 | 0.09 | Upregulated | 3.02 | 1.26E-16 | 3.57E-16 |

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|-----------------|-----------|---|---|------|-----|------|--|------|----------|----------|
| | | intracellular proteins, Transcription factors | | | | | DEGs | | | |
| <i>ENI</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.09 | 134 | 0.12 | Upregulated DEGs | 2.30 | 1.67E-16 | 4.7E-16 |
| <i>IDO1</i> | 4. Others | Cancer-related genes, Enzymes, Predicted intracellular proteins | 5 | 0.09 | 43 | 0.04 | Upregulated DEGs | 2.12 | 2.21E-16 | 6.2E-16 |
| <i>VTN</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 80 | 0.07 | Upregulated DEGs | 2.50 | 2.25E-16 | 6.3E-16 |
| <i>SOX2</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted intracellular proteins, Transcription factors | 7 | 0.12 | 99 | 0.09 | Upregulated DEGs | 3.37 | 2.53E-16 | 7.08E-16 |
| <i>PADI3</i> | 4. Others | Enzymes, Predicted intracellular proteins | 6 | 0.10 | 91 | 0.08 | Upregulated DEGs | 3.21 | 2.78E-16 | 7.76E-16 |
| <i>ADAMTS19</i> | 4. Others | Enzymes, Predicted secreted proteins | 5 | 0.09 | 34 | 0.03 | Upregulated DEGs | 2.54 | 3.67E-16 | 1.02E-15 |
| <i>GSDMC</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 58 | 0.05 | Upregulated DEGs | 2.10 | 3.9E-16 | 1.08E-15 |
| <i>SNF8</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 14 | 0.01 | Non- differentially expressed genes | 0.63 | 4.57E-16 | 1.26E-15 |
| <i>PGBD5</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 71 | 0.06 | Upregulated DEGs | 1.78 | 4.56E-16 | 1.26E-15 |
| <i>NTNG1</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 125 | 0.11 | Upregulated DEGs | 2.91 | 8.57E-16 | 2.33E-15 |
| <i>BCL2A1</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 5 | 0.09 | 23 | 0.02 | Upregulated DEGs | 1.58 | 1.26E-15 | 3.38E-15 |
| <i>C5orf46</i> | 4. Others | Predicted secreted proteins | 8 | 0.14 | 26 | 0.02 | Upregulated DEGs | 1.72 | 1.35E-15 | 3.63E-15 |
| <i>CLEC3A</i> | 4. Others | Predicted secreted proteins | 8 | 0.14 | 164 | 0.15 | Upregulated DEGs | 5.55 | 1.51E-15 | 4.06E-15 |
| <i>PHB</i> | 4. Others | Mitochondrial proteins, Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 16 | 0.01 | Non- differentially expressed genes | 0.64 | 1.84E-15 | 4.93E-15 |

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|------------------|-----------|---|---|------|-----|------|------------------|------|----------|----------|
| <i>GALNT5</i> | 4. Others | Enzymes, Predicted intracellular proteins | 8 | 0.14 | 36 | 0.03 | Upregulated DEGs | 1.71 | 2.6E-15 | 6.9E-15 |
| <i>UBD</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 37 | 0.03 | Upregulated DEGs | 1.86 | 3.59E-15 | 9.49E-15 |
| <i>CXCL17</i> | 4. Others | Predicted secreted proteins | 4 | 0.07 | 76 | 0.07 | Upregulated DEGs | 2.53 | 4.9E-15 | 1.29E-14 |
| <i>COL2A1</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted secreted proteins | 3 | 0.05 | 151 | 0.14 | Upregulated DEGs | 3.37 | 7.11E-15 | 1.85E-14 |
| <i>RAPGEFL1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 28 | 0.03 | Upregulated DEGs | 1.31 | 8.66E-15 | 2.24E-14 |
| <i>PAH</i> | 4. Others | Disease related genes, Enzymes, FDA approved drug targets, Predicted intracellular proteins | 2 | 0.03 | 37 | 0.03 | Upregulated DEGs | 2.72 | 9.06E-15 | 2.35E-14 |
| <i>GRB7</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 7 | 0.12 | 76 | 0.07 | Upregulated DEGs | 1.37 | 1.33E-14 | 3.43E-14 |
| <i>TMSB15A</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 3 | 0.05 | 61 | 0.06 | Upregulated DEGs | 1.81 | 1.45E-14 | 3.73E-14 |
| <i>IVL</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 98 | 0.09 | Upregulated DEGs | 3.96 | 1.59E-14 | 4.07E-14 |
| <i>RAB11FIP1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 32 | 0.03 | Upregulated DEGs | 1.17 | 1.95E-14 | 4.98E-14 |
| <i>NEFH</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 6 | 0.10 | 44 | 0.04 | Upregulated DEGs | 1.66 | 2.57E-14 | 6.52E-14 |
| <i>HOXB6</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 65 | 0.06 | Upregulated DEGs | 1.63 | 4.18E-14 | 1.05E-13 |
| <i>LYZ</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted secreted proteins | 4 | 0.07 | 19 | 0.02 | Upregulated DEGs | 1.34 | 9.79E-14 | 2.42E-13 |
| <i>AGT</i> | 4. Others | Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted secreted proteins | 3 | 0.05 | 32 | 0.03 | Upregulated DEGs | 1.66 | 1.49E-13 | 3.64E-13 |
| <i>ZMAT4</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 68 | 0.06 | Upregulated DEGs | 2.20 | 1.59E-13 | 3.87E-13 |
| <i>GLYATL1</i> | 4. Others | Enzymes, Mitochondrial proteins, Predicted intracellular proteins | 2 | 0.03 | 18 | 0.02 | Upregulated DEGs | 1.80 | 1.65E-13 | 4.03E-13 |

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|-----------------|-----------|--|---|------|-----|------|------------------------------------|-------|----------|----------|
| <i>CTTNBP2</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 6 | 0.10 | 20 | 0.02 | Downregulated DEGs | -1.15 | 2.89E-13 | 6.97E-13 |
| <i>BAIAP2L2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 45 | 0.04 | Upregulated DEGs | 1.59 | 4.78E-13 | 1.14E-12 |
| <i>PCSK9</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted secreted proteins | 7 | 0.12 | 38 | 0.03 | Upregulated DEGs | 1.74 | 5.06E-13 | 1.21E-12 |
| <i>NCCRP1</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 83 | 0.08 | Upregulated DEGs | 2.18 | 5.51E-13 | 1.31E-12 |
| <i>FAM19A5</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 4 | 0.07 | 17 | 0.02 | Upregulated DEGs | 1.21 | 5.93E-13 | 1.41E-12 |
| <i>ORAOV1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 22 | 0.02 | Non-differentially expressed genes | 0.72 | 9.23E-13 | 2.17E-12 |
| <i>BEX1</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 154 | 0.14 | Upregulated DEGs | 2.82 | 1.01E-12 | 2.36E-12 |
| <i>DUSP15</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | Upregulated DEGs | 1.44 | 1.03E-12 | 2.42E-12 |
| <i>BARX1</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.05 | 74 | 0.07 | Upregulated DEGs | 2.37 | 2.07E-12 | 4.79E-12 |
| <i>TPRG1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 32 | 0.03 | Upregulated DEGs | 1.81 | 2.14E-12 | 4.95E-12 |
| <i>ANKRD30B</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 29 | 0.03 | Upregulated DEGs | 2.19 | 3.14E-12 | 7.2E-12 |
| <i>FOXA3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 5 | 0.09 | 86 | 0.08 | Upregulated DEGs | 2.11 | 3.73E-12 | 8.51E-12 |
| <i>C2CD4A</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 54 | 0.05 | Upregulated DEGs | 2.14 | 5.8E-12 | 1.31E-11 |
| <i>BRF2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 42 | 0.04 | Non-differentially expressed genes | 0.77 | 8.6E-12 | 1.92E-11 |
| <i>C15orf59</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 21 | 0.02 | Upregulated DEGs | 1.27 | 1.13E-11 | 2.51E-11 |
| <i>ABHD12B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 122 | 0.11 | Upregulated DEGs | 2.17 | 1.39E-11 | 3.08E-11 |

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|-----------------|-----------|---|---|------|----|------|------------------------------------|------|----------|----------|
| <i>HEATR6</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 25 | 0.02 | Non-differentially expressed genes | 0.62 | 2.01E-11 | 4.43E-11 |
| <i>CLIC6</i> | 4. Others | Predicted intracellular proteins, Transporters | 6 | 0.10 | 51 | 0.05 | Upregulated DEGs | 1.91 | 4.29E-11 | 9.28E-11 |
| <i>HOXA11</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 28 | 0.03 | Upregulated DEGs | 1.22 | 6.21E-11 | 1.33E-10 |
| <i>KNDC1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 49 | 0.04 | Upregulated DEGs | 2.00 | 1.38E-10 | 2.91E-10 |
| <i>LRRC31</i> | 4. Others | Predicted intracellular proteins | 9 | 0.16 | 32 | 0.03 | Upregulated DEGs | 2.32 | 2.37E-10 | 4.93E-10 |
| <i>MAT1A</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 46 | 0.04 | Upregulated DEGs | 1.66 | 3.02E-10 | 6.24E-10 |
| <i>NDP</i> | 4. Others | Disease related genes, Predicted secreted proteins | 5 | 0.09 | 81 | 0.07 | Upregulated DEGs | 1.84 | 3.04E-10 | 6.28E-10 |
| <i>RAB39B</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 16 | 0.01 | Upregulated DEGs | 1.16 | 3.65E-10 | 7.52E-10 |
| <i>SERPINE2</i> | 4. Others | Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 15 | 0.01 | Non-differentially expressed genes | 0.84 | 4.13E-10 | 8.49E-10 |
| <i>GRB14</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 60 | 0.05 | Upregulated DEGs | 1.81 | 4.25E-10 | 8.73E-10 |
| <i>MSL1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 41 | 0.04 | Non-differentially expressed genes | 0.60 | 7.52E-10 | 1.52E-09 |
| <i>S100A2</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 3 | 0.05 | 55 | 0.05 | Upregulated DEGs | 1.84 | 9.85E-10 | 1.98E-09 |
| <i>EOMES</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 4 | 0.07 | 14 | 0.01 | Upregulated DEGs | 1.15 | 1.97E-09 | 3.9E-09 |

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|----------------|-----------|--|---|------|-----|------|--|-------|-------------|-------------|
| <i>SP5</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 46 | 0.04 | Upregulated DEGs | 1.57 | 2.29E-09 | 4.52E-09 |
| <i>RASD2</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 41 | 0.04 | Non- differentially expressed genes | 0.96 | 3.54E-09 | 6.93E-09 |
| <i>ENHO</i> | 4. Others | Predicted secreted proteins | 3 | 0.05 | 34 | 0.03 | Upregulated DEGs | 1.26 | 3.65E-09 | 7.15E-09 |
| <i>SLAIN1</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 14 | 0.01 | Non- differentially expressed genes | -0.94 | 4.32E-09 | 8.41E-09 |
| <i>WDR72</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 7 | 0.12 | 77 | 0.07 | Upregulated DEGs | 2.18 | 4.39E-09 | 8.54E-09 |
| <i>KRT16</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Plasma proteins, Predicted intracellular proteins | 5 | 0.09 | 113 | 0.10 | Upregulated DEGs | 1.92 | 2.11E-08 | 3.96E-08 |
| <i>CCNB3</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 17 | 0.02 | Non- differentially expressed genes | 0.83 | 2.12E-08 | 3.98E-08 |
| <i>SNTB1</i> | 4. Others | Cytoskeleton related proteins, Plasma proteins, Predicted secreted proteins | 4 | 0.07 | 19 | 0.02 | Non- differentially expressed genes | -0.56 | 2.13E-08 | 4.01E-08 |
| <i>C8orf46</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 68 | 0.06 | Upregulated DEGs | 1.39 | 2.33E-08 | 4.37E-08 |
| <i>CPA4</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 65 | 0.06 | Upregulated DEGs | 1.34 | 2.58E-08 | 4.84E-08 |
| <i>RBP1</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 26 | 0.02 | Non- differentially expressed genes | 0.99 | 4.43E-08 | 8.17E-08 |
| <i>USP32</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 21 | 0.02 | Non- differentially expressed | 0.56 | 0.000000055 | 0.000000101 |

| | | | | | | | genes | | | |
|-----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>MT1G</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 25 | 0.02 | Upregulated DEGs | 1.11 | 0.000000254 | 0.000000447 |
| <i>FAM178B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 44 | 0.04 | Upregulated DEGs | 1.16 | 0.000000259 | 0.000000455 |
| <i>RBP5</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 28 | 0.03 | Non-differentially expressed genes | 0.89 | 0.000000314 | 0.000000549 |
| <i>ASH2L</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 51 | 0.05 | Non-differentially expressed genes | 0.53 | 0.000000323 | 0.000000564 |
| <i>HEY1</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 14 | 0.01 | Non-differentially expressed genes | -0.49 | 0.000000338 | 0.000000588 |
| <i>STC1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 19 | 0.02 | Non-differentially expressed genes | 0.88 | 0.000000701 | 0.00000012 |
| <i>ATP6VIC2</i> | 4. Others | Predicted intracellular proteins, Transporters | 5 | 0.09 | 32 | 0.03 | Non-differentially expressed genes | 0.76 | 0.000000861 | 0.000000146 |
| <i>CRYM</i> | 4. Others | Enzymes, Predicted intracellular proteins | 5 | 0.09 | 71 | 0.06 | Upregulated DEGs | 1.43 | 0.000000893 | 0.000000152 |
| <i>OBP2B</i> | 4. Others | Predicted secreted proteins | 3 | 0.05 | 69 | 0.06 | Upregulated DEGs | 1.82 | 0.000000131 | 0.000000221 |
| <i>DPYSL4</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 34 | 0.03 | Non-differentially expressed genes | 0.93 | 0.000000141 | 0.000000237 |
| <i>COCH</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 69 | 0.06 | Upregulated DEGs | 1.18 | 0.000000189 | 0.000000316 |

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|----------------|-----------|---|----|------|----|------|------------------------------------|-------|------------|------------|
| <i>FAM84A</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 24 | 0.02 | Non-differentially expressed genes | 0.74 | 0.00000241 | 0.00000399 |
| <i>WFDC2</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 10 | 0.17 | 13 | 0.01 | Upregulated DEGs | 1.03 | 0.00000442 | 0.00000721 |
| <i>FAM167A</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | 0.73 | 0.00000457 | 0.00000745 |
| <i>ARHGEF9</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 19 | 0.02 | Non-differentially expressed genes | -0.33 | 0.00000508 | 0.00000826 |
| <i>GOLGA7B</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 12 | 0.01 | Non-differentially expressed genes | -0.58 | 0.00000942 | 0.000015 |
| <i>SCUBE2</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 10 | 0.17 | 11 | 0.01 | Upregulated DEGs | 1.00 | 0.00000967 | 0.0000154 |
| <i>MAP7D2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 73 | 0.07 | Upregulated DEGs | 1.07 | 0.00000992 | 0.0000158 |
| <i>SESN3</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 13 | 0.01 | Non-differentially expressed genes | -0.65 | 0.0000112 | 0.0000177 |
| <i>FBXL13</i> | 4. Others | Predicted intracellular proteins | 8 | 0.14 | 43 | 0.04 | Non-differentially expressed genes | 0.73 | 0.000012 | 0.000019 |
| <i>VSNL1</i> | 4. Others | Predicted intracellular proteins | 8 | 0.14 | 26 | 0.02 | Non-differentially expressed genes | -0.69 | 0.000013 | 0.0000206 |
| <i>MED1</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 46 | 0.04 | Non-differentially expressed | 0.53 | 0.0000132 | 0.0000209 |

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|-----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | genes | | | |
| <i>COL21A1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.09 | 14 | 0.01 | Non-differentially expressed genes | -0.62 | 0.0000163 | 0.0000256 |
| <i>IGSF21</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 24 | 0.02 | Non-differentially expressed genes | 0.85 | 0.0000167 | 0.0000262 |
| <i>RGS5</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 19 | 0.02 | Non-differentially expressed genes | -0.56 | 0.0000296 | 0.0000457 |
| <i>PKP1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 34 | 0.03 | Non-differentially expressed genes | -0.82 | 0.0000382 | 0.0000584 |
| <i>FBXL20</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 5 | 0.09 | 43 | 0.04 | Non-differentially expressed genes | 0.46 | 0.0000414 | 0.0000632 |
| <i>SCGB2A2</i> | 4. Others | Cancer-related genes, Predicted secreted proteins | 9 | 0.16 | 69 | 0.06 | Upregulated DEGs | 1.47 | 0.0000417 | 0.0000637 |
| <i>FOXQ1</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Transcription factors | 7 | 0.12 | 29 | 0.03 | Non-differentially expressed genes | 0.77 | 0.0000719 | 0.000108295 |
| <i>SERPINA5</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 7 | 0.12 | 11 | 0.01 | Non-differentially expressed genes | 0.88 | 0.000084 | 0.00012586 |
| <i>FGF12</i> | 4. Others | Predicted intracellular proteins, RAS pathway related proteins | 3 | 0.05 | 40 | 0.04 | Non-differentially expressed genes | 0.75 | 0.0000964 | 0.000143778 |
| <i>LCN2</i> | 4. Others | Candidate cardiovascular disease genes, Plasma proteins, Predicted secreted proteins | 6 | 0.10 | 61 | 0.06 | Upregulated DEGs | 1.10 | 0.000108835 | 0.000161668 |

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|-----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>SERPINB5</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 46 | 0.04 | Non-differentially expressed genes | -0.83 | 0.000123286 | 0.000182388 |
| <i>FLG</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 17 | 0.02 | Non-differentially expressed genes | -0.69 | 0.000178004 | 0.000260952 |
| <i>ZNF488</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 25 | 0.02 | Non-differentially expressed genes | -0.64 | 0.000180648 | 0.000264751 |
| <i>ERLIN2</i> | 4. Others | Disease related genes, Predicted secreted proteins | 2 | 0.03 | 27 | 0.02 | Non-differentially expressed genes | 0.42 | 0.000214179 | 0.000312355 |
| <i>MUC20</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.09 | 36 | 0.03 | Non-differentially expressed genes | 0.67 | 0.000225733 | 0.000328497 |
| <i>SERPINI1</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 35 | 0.03 | Non-differentially expressed genes | 0.61 | 0.00025043 | 0.000363125 |
| <i>GLIPR2</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | -0.38 | 0.000272559 | 0.000394405 |
| <i>GSDMB</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 31 | 0.03 | Non-differentially expressed genes | 0.62 | 0.000290295 | 0.000419012 |
| <i>TRIM17</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 18 | 0.02 | Non-differentially expressed genes | 0.67 | 0.000413768 | 0.000590593 |
| <i>FAM81A</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | Non-differentially | 0.46 | 0.000452714 | 0.000644515 |

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|----------------|-----------|---|----|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | expressed genes | | | |
| <i>KANK4</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 23 | 0.02 | Non-differentially expressed genes | -0.54 | 0.00056875 | 0.000803414 |
| <i>PALM3</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 19 | 0.02 | Non-differentially expressed genes | 0.63 | 0.000574283 | 0.000810999 |
| <i>WNT5B</i> | 4. Others | Predicted secreted proteins | 6 | 0.10 | 13 | 0.01 | Non-differentially expressed genes | -0.43 | 0.000606553 | 0.000855515 |
| <i>ZNF385B</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 78 | 0.07 | Non-differentially expressed genes | 0.80 | 0.000912783 | 0.001269643 |
| <i>ZNF385D</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 26 | 0.02 | Non-differentially expressed genes | -0.53 | 0.001050358 | 0.001453268 |
| <i>WIPF2</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 4 | 0.07 | 22 | 0.02 | Non-differentially expressed genes | 0.31 | 0.001077206 | 0.001488618 |
| <i>AMDHD1</i> | 4. Others | Enzymes, Predicted intracellular proteins | 6 | 0.10 | 34 | 0.03 | Non-differentially expressed genes | 0.60 | 0.001282717 | 0.001762967 |
| <i>SCG5</i> | 4. Others | Predicted secreted proteins | 12 | 0.21 | 19 | 0.02 | Non-differentially expressed genes | -0.42 | 0.0014796 | 0.002025152 |
| <i>BCL2L14</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 34 | 0.03 | Non-differentially expressed genes | 0.70 | 0.001543751 | 0.002111017 |

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|----------------|-----------|--|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>GLYATL2</i> | 4. Others | Enzymes, Mitochondrial proteins, Predicted intracellular proteins | 8 | 0.14 | 75 | 0.07 | Non-differentially expressed genes | 0.85 | 0.002021561 | 0.002737259 |
| <i>PPM1D</i> | 4. Others | Cancer-related genes, Enzymes, Plasma proteins, Predicted intracellular proteins | 4 | 0.07 | 23 | 0.02 | Non-differentially expressed genes | -0.24 | 0.002437137 | 0.003279982 |
| <i>EDIL3</i> | 4. Others | Predicted secreted proteins | 10 | 0.17 | 12 | 0.01 | Non-differentially expressed genes | 0.49 | 0.004710788 | 0.006215253 |
| <i>PROSC</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 33 | 0.03 | Non-differentially expressed genes | 0.27 | 0.005152497 | 0.006776084 |
| <i>SULT1C2</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 33 | 0.03 | Non-differentially expressed genes | 0.64 | 0.005626167 | 0.007373977 |
| <i>DLGAP1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 31 | 0.03 | Non-differentially expressed genes | 0.64 | 0.005955972 | 0.007794578 |
| <i>BMP7</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.10 | 39 | 0.04 | Non-differentially expressed genes | 0.52 | 0.007701852 | 0.00999074 |
| <i>TRIM9</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 4 | 0.07 | 42 | 0.04 | Non-differentially expressed genes | -0.43 | 0.008753874 | 0.011296374 |
| <i>GNAO1</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 45 | 0.04 | Non-differentially expressed genes | 0.47 | 0.009644983 | 0.012407595 |
| <i>IRX4</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, | 3 | 0.05 | 25 | 0.02 | Non-differentially | -0.54 | 0.01102026 | 0.014095219 |

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|----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | Transcription factors | | | | | expressed genes | | | |
| <i>CYP27C1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 80 | 0.07 | Non-differentially expressed genes | 0.53 | 0.014483249 | 0.018321501 |
| <i>LIPG</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 6 | 0.10 | 24 | 0.02 | Non-differentially expressed genes | 0.46 | 0.015376733 | 0.019403972 |
| <i>PCP4L1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 61 | 0.06 | Non-differentially expressed genes | 0.54 | 0.018536694 | 0.023247746 |
| <i>CHI3L2</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 7 | 0.12 | 44 | 0.04 | Non-differentially expressed genes | 0.49 | 0.023840156 | 0.029580226 |
| <i>ESRRG</i> | 4. Others | FDA approved drug targets, Nuclear receptors, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 31 | 0.03 | Non-differentially expressed genes | 0.43 | 0.024551162 | 0.030411749 |
| <i>GPRIN2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 13 | 0.01 | Non-differentially expressed genes | -0.43 | 0.025228831 | 0.031194103 |
| <i>FRZB</i> | 4. Others | Disease related genes, Predicted secreted proteins | 3 | 0.05 | 13 | 0.01 | Non-differentially expressed genes | -0.32 | 0.02662808 | 0.032820657 |
| <i>MLLT6</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 2 | 0.03 | 15 | 0.01 | Non-differentially expressed genes | -0.17 | 0.026988374 | 0.033253731 |
| <i>NRTN</i> | 4. Others | Disease related genes, Predicted secreted proteins | 3 | 0.05 | 51 | 0.05 | Non-differentially expressed genes | 0.43 | 0.02709551 | 0.033374694 |

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|----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>PLAC8</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 23 | 0.02 | Non-differentially expressed genes | 0.39 | 0.028116804 | 0.034601187 |
| <i>FAM65C</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 32 | 0.03 | Non-differentially expressed genes | 0.38 | 0.033183229 | 0.040567873 |
| <i>FRS2</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 14 | 0.01 | Non-differentially expressed genes | 0.23 | 0.036841153 | 0.044859398 |
| <i>SNX11</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | 0.12 | 0.041904977 | 0.050747343 |
| <i>BCL11A</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins, Transcription factors | 6 | 0.10 | 20 | 0.02 | Non-differentially expressed genes | -0.40 | 0.047867368 | 0.057625795 |
| <i>KLHL14</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 34 | 0.03 | Non-differentially expressed genes | -0.31 | 0.08376945 | 0.098638394 |
| <i>RGS22</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 30 | 0.03 | Non-differentially expressed genes | 0.40 | 0.089323894 | 0.104880223 |
| <i>CWC25</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 26 | 0.02 | Non-differentially expressed genes | -0.12 | 0.091261747 | 0.107071151 |
| <i>FOXC2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 40 | 0.04 | Non-differentially expressed genes | 0.30 | 0.091449572 | 0.107274612 |
| <i>PPP1R1B</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 39 | 0.04 | Non-differentially | 0.42 | 0.095572081 | 0.111916575 |

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|----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | expressed genes | | | |
| <i>PIP4K2B</i> | 4. Others | Cancer-related genes, Enzymes, Predicted intracellular proteins | 4 | 0.07 | 23 | 0.02 | Non-differentially expressed genes | -0.12 | 0.095939447 | 0.112320272 |
| <i>ASB9</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 12 | 0.01 | Non-differentially expressed genes | -0.20 | 0.101632873 | 0.11868724 |
| <i>TUBD1</i> | 4. Others | FDA approved drug targets, Predicted intracellular proteins | 3 | 0.05 | 16 | 0.01 | Non-differentially expressed genes | 0.13 | 0.108745274 | 0.126556487 |
| <i>FOXH1</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Transcription factors | 5 | 0.09 | 16 | 0.01 | Non-differentially expressed genes | -0.37 | 0.108994426 | 0.126836536 |
| <i>CRMP1</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 3 | 0.05 | 39 | 0.04 | Non-differentially expressed genes | 0.22 | 0.115980901 | 0.134609068 |
| <i>LIN7A</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 17 | 0.02 | Non-differentially expressed genes | 0.30 | 0.150416162 | 0.172411907 |
| <i>FCGBP</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 32 | 0.03 | Non-differentially expressed genes | -0.24 | 0.156008616 | 0.178478747 |
| <i>PRR16</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 28 | 0.03 | Non-differentially expressed genes | 0.18 | 0.166664767 | 0.189969262 |
| <i>C8orf4</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 17 | 0.02 | Non-differentially expressed genes | 0.23 | 0.174716648 | 0.198584678 |

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|----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>C3orf70</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 7 | 0.12 | 14 | 0.01 | Non-differentially expressed genes | -0.17 | 0.175701387 | 0.199597312 |
| <i>PLAT</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Enzymes, FDA approved drug targets, Plasma proteins, Predicted secreted proteins | 7 | 0.12 | 16 | 0.01 | Non-differentially expressed genes | -0.18 | 0.224286261 | 0.25111226 |
| <i>STMN2</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 13 | 0.01 | Non-differentially expressed genes | 0.20 | 0.225399185 | 0.252301395 |
| <i>MYO7A</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 22 | 0.02 | Non-differentially expressed genes | -0.16 | 0.253278696 | 0.281246617 |
| <i>PNMA2</i> | 4. Others | Predicted intracellular proteins | 7 | 0.12 | 21 | 0.02 | Non-differentially expressed genes | -0.15 | 0.315938918 | 0.346307375 |
| <i>CASC3</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Transporters | 3 | 0.05 | 32 | 0.03 | Non-differentially expressed genes | 0.09 | 0.322549268 | 0.353059404 |
| <i>ELN</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted secreted proteins | 8 | 0.14 | 11 | 0.01 | Non-differentially expressed genes | 0.16 | 0.323704963 | 0.354194256 |
| <i>ALX3</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 18 | 0.02 | Non-differentially expressed genes | -0.11 | 0.324285804 | 0.354803738 |
| <i>ADD2</i> | 4. Others | Cytoskeleton related proteins, Predicted intracellular proteins | 2 | 0.03 | 55 | 0.05 | Non-differentially expressed genes | 0.17 | 0.33794404 | 0.368880137 |

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|----------------|-----------|---|---|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>AP3B2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 27 | 0.02 | Non-differentially expressed genes | 0.19 | 0.346431741 | 0.377480825 |
| <i>MACROD2</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 18 | 0.02 | Non-differentially expressed genes | -0.13 | 0.366907096 | 0.398014959 |
| <i>KLK10</i> | 4. Others | Cancer-related genes, Enzymes, Predicted secreted proteins | 5 | 0.09 | 81 | 0.07 | Non-differentially expressed genes | 0.21 | 0.459918357 | 0.49114901 |
| <i>MF12</i> | 4. Others | CD markers, Plasma proteins, Predicted secreted proteins | 2 | 0.03 | 65 | 0.06 | Non-differentially expressed genes | 0.12 | 0.481840633 | 0.512868249 |
| <i>CSTA</i> | 4. Others | Cancer-related genes, Disease related genes, Plasma proteins, Predicted intracellular proteins | 6 | 0.10 | 51 | 0.05 | Non-differentially expressed genes | -0.11 | 0.526222234 | 0.556567554 |
| <i>TGM1</i> | 4. Others | Disease related genes, Enzymes, Plasma proteins, Potential drug targets, Predicted intracellular proteins | 3 | 0.05 | 47 | 0.04 | Non-differentially expressed genes | -0.10 | 0.536004051 | 0.5658686 |
| <i>TNFSF15</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 22 | 0.02 | Non-differentially expressed genes | 0.11 | 0.540547162 | 0.5702606 |
| <i>RARRES1</i> | 4. Others | Predicted secreted proteins | 9 | 0.16 | 65 | 0.06 | Non-differentially expressed genes | 0.11 | 0.583605122 | 0.612474885 |
| <i>CXCL14</i> | 4. Others | Predicted secreted proteins | 8 | 0.14 | 54 | 0.05 | Non-differentially expressed genes | -0.11 | 0.592266697 | 0.620952335 |
| <i>TOX</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 3 | 0.05 | 11 | 0.01 | Non-differentially | -0.06 | 0.70865179 | 0.733320671 |

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|----------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | expressed genes | | | |
| <i>PEG3</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 8 | 0.14 | 77 | 0.07 | Non-differentially expressed genes | 0.07 | 0.727822337 | 0.750915003 |
| <i>GUCY1A2</i> | 4. Others | Enzymes, FDA approved drug targets, Predicted intracellular proteins | 3 | 0.05 | 25 | 0.02 | Non-differentially expressed genes | 0.05 | 0.740567304 | 0.762532416 |
| <i>POF1B</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 2 | 0.03 | 16 | 0.01 | Non-differentially expressed genes | 0.07 | 0.741005321 | 0.762877938 |
| <i>PHACTR1</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.09 | 14 | 0.01 | Non-differentially expressed genes | 0.04 | 0.742905368 | 0.764516974 |
| <i>PDE10A</i> | 4. Others | Enzymes, FDA approved drug targets, Predicted intracellular proteins | 4 | 0.07 | 18 | 0.02 | Non-differentially expressed genes | -0.04 | 0.75046736 | 0.771552561 |
| <i>LTF</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 58 | 0.05 | Non-differentially expressed genes | -0.08 | 0.7617691 | 0.781930334 |
| <i>C8orf84</i> | 4. Others | Predicted secreted proteins | 8 | 0.14 | 42 | 0.04 | Non-differentially expressed genes | 0.06 | 0.771828471 | 0.791546716 |
| <i>KRT222</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 18 | 0.02 | Non-differentially expressed genes | -0.03 | 0.811208455 | 0.828623287 |
| <i>SOX15</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 7 | 0.12 | 45 | 0.04 | Non-differentially expressed genes | -0.04 | 0.818851842 | 0.835914763 |

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|------------------|-----------|---|----|------|----|------|------------------------------------|-------|-------------|-------------|
| <i>APPBP2</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 3 | 0.05 | 16 | 0.01 | Non-differentially expressed genes | 0.02 | 0.832452454 | 0.848345038 |
| <i>KRT23</i> | 4. Others | Predicted intracellular proteins | 10 | 0.17 | 27 | 0.02 | Non-differentially expressed genes | -0.03 | 0.876528848 | 0.88882305 |
| <i>DOK6</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 11 | 0.01 | Non-differentially expressed genes | -0.02 | 0.902381245 | 0.912800644 |
| <i>TNFRSF11B</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted secreted proteins | 6 | 0.10 | 26 | 0.02 | Non-differentially expressed genes | 0.00 | 0.976682143 | 0.979378343 |
| <i>ALOX12</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 2 | 0.03 | 33 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>BTBD16</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 11 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>C16orf73</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 45 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>C1orf187</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 20 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>C8orf31</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>CAPN14</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 20 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CCDC83</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 27 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CNDP1</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 2 | 0.03 | 37 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>COX6B2</i> | 4. Others | Mitochondrial proteins, Predicted intracellular proteins, Transporters | 2 | 0.03 | 51 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>CPNE9</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 21 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>DHDH</i> | 4. Others | Enzymes, Predicted intracellular proteins | 2 | 0.03 | 15 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>DMRTA2</i> | 4. Others | Predicted secreted proteins, Transcription factors | 2 | 0.03 | 88 | 0.08 | #N/A | #N/A | #N/A | #N/A |

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|-----------------|-----------|---|---|------|----|------|------|------|------|------|
| <i>DYDC2</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 21 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>ENDOU</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>FAM19A4</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 49 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>FBLL1</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>HIST1H1D</i> | 4. Others | Predicted intracellular proteins | 2 | 0.03 | 13 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>HOXC12</i> | 4. Others | Plasma proteins, Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 39 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>PRSS35</i> | 4. Others | Enzymes, Predicted secreted proteins | 2 | 0.03 | 13 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>SOX30</i> | 4. Others | Predicted intracellular proteins, Transcription factors | 2 | 0.03 | 26 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>SPINK2</i> | 4. Others | Predicted secreted proteins | 2 | 0.03 | 27 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>BCMO1</i> | 4. Others | Disease related genes, Enzymes, Potential drug targets, Predicted intracellular proteins | 3 | 0.05 | 22 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>CCDC147</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>CYP2C8</i> | 4. Others | Enzymes, Plasma proteins, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 40 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>ERC2</i> | 4. Others | Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 13 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>HIST1H1E</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins | 3 | 0.05 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>IL23A</i> | 4. Others | Predicted secreted proteins | 3 | 0.05 | 27 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>IL24</i> | 4. Others | Cancer-related genes, Predicted intracellular proteins, Predicted secreted proteins | 3 | 0.05 | 30 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KHDC1L</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 41 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>KRT32</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 28 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KRT37</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 17 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>NGF</i> | 4. Others | Cancer-related genes, Candidate cardiovascular disease genes, Disease related genes, Plasma proteins, Predicted secreted proteins, RAS pathway related proteins | 3 | 0.05 | 13 | 0.01 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|------------------|-----------|--|---|------|-----|------|------|------|------|------|
| <i>SEC14L4</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 111 | 0.10 | #N/A | #N/A | #N/A | #N/A |
| <i>SLURP1</i> | 4. Others | Disease related genes, Plasma proteins, Predicted secreted proteins | 3 | 0.05 | 88 | 0.08 | #N/A | #N/A | #N/A | #N/A |
| <i>TCHH</i> | 4. Others | Cytoskeleton related proteins, Plasma proteins, Predicted intracellular proteins | 3 | 0.05 | 23 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>TEX19</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 55 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>ZCCHC18</i> | 4. Others | Predicted intracellular proteins | 3 | 0.05 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>ACOXL</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 39 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>C14orf182</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>C5orf58</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 23 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>IGF2BP1</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 34 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>KISS1</i> | 4. Others | Cancer-related genes, Disease related genes, Predicted secreted proteins | 4 | 0.07 | 21 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>NOG</i> | 4. Others | Disease related genes, Predicted secreted proteins | 4 | 0.07 | 27 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>S100A5</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>TNIP3</i> | 4. Others | Predicted intracellular proteins | 4 | 0.07 | 46 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>ARL9</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 34 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>ARMC4</i> | 4. Others | Cytoskeleton related proteins, Disease related genes, Predicted intracellular proteins | 5 | 0.09 | 43 | 0.04 | #N/A | #N/A | #N/A | #N/A |
| <i>CCL26</i> | 4. Others | Predicted secreted proteins | 5 | 0.09 | 14 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>EN2</i> | 4. Others | Disease related genes, Predicted intracellular proteins, Transcription factors | 5 | 0.09 | 65 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>FABP6</i> | 4. Others | Predicted intracellular proteins, Predicted secreted proteins | 5 | 0.09 | 80 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>FAM133A</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 38 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>SH3GL2</i> | 4. Others | Predicted intracellular proteins | 5 | 0.09 | 80 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>C17orf104</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 33 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>NEFL</i> | 4. Others | Disease related genes, Predicted intracellular proteins | 6 | 0.10 | 25 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>NEFM</i> | 4. Others | Plasma proteins, Predicted intracellular proteins | 6 | 0.10 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>RAB3B</i> | 4. Others | Predicted intracellular proteins | 6 | 0.10 | 40 | 0.04 | #N/A | #N/A | #N/A | #N/A |

| | | | | | | | | | | |
|------------------|-----------|---|----|------|-----|------|------------------------------------|-------|-------------|-------------|
| <i>IL1A</i> | 4. Others | Cancer-related genes, Plasma proteins, Predicted intracellular proteins | 7 | 0.12 | 21 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>PSG5</i> | 4. Others | Predicted secreted proteins | 7 | 0.12 | 52 | 0.05 | #N/A | #N/A | #N/A | #N/A |
| <i>OTOR</i> | 4. Others | Predicted secreted proteins | 8 | 0.14 | 38 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>CALBI</i> | 4. Others | Predicted intracellular proteins | 10 | 0.17 | 23 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>FGF5</i> | 4. Others | Predicted secreted proteins, RAS pathway related proteins | 10 | 0.17 | 32 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>UCA1</i> | 5. ncRNA | | 9 | 0.16 | 45 | 0.04 | Upregulated DEGs | 2.13 | 4.38E-12 | 9.96E-12 |
| <i>LOC145837</i> | 5. ncRNA | | 3 | 0.05 | 18 | 0.02 | Upregulated DEGs | 1.33 | 1.84E-09 | 3.66E-09 |
| <i>HARIA</i> | 5. ncRNA | | 4 | 0.07 | 67 | 0.06 | Upregulated DEGs | 1.39 | 1.07E-08 | 2.04E-08 |
| <i>LOC254559</i> | 5. ncRNA | | 2 | 0.03 | 16 | 0.01 | Non-differentially expressed genes | 0.50 | 0.001044802 | 0.001445985 |
| <i>EGOT</i> | 5. ncRNA | | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed genes | -0.22 | 0.192718371 | 0.217782434 |
| <i>LOC84856</i> | 5. ncRNA | | 3 | 0.05 | 77 | 0.07 | Non-differentially expressed genes | 0.07 | 0.729673772 | 0.75240819 |
| <i>LOC389332</i> | 5. ncRNA | | 2 | 0.03 | 62 | 0.06 | #N/A | #N/A | #N/A | #N/A |
| <i>LOC150622</i> | 5. ncRNA | | 3 | 0.05 | 82 | 0.07 | #N/A | #N/A | #N/A | #N/A |
| <i>MGC16121</i> | 5. ncRNA | | 5 | 0.09 | 12 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>ABCC13</i> | 6. pseudo | | 6 | 0.10 | 95 | 0.09 | Upregulated DEGs | 6.01 | 1.78E-26 | 7.71E-26 |
| <i>CYP2B7P1</i> | 6. pseudo | | 8 | 0.14 | 29 | 0.03 | Upregulated DEGs | 3.76 | 3.33E-24 | 1.31E-23 |
| <i>TCAM1P</i> | 6. pseudo | | 2 | 0.03 | 103 | 0.09 | Upregulated DEGs | 3.09 | 1.21E-16 | 3.42E-16 |
| <i>CYP4Z2P</i> | 6. pseudo | | 2 | 0.03 | 11 | 0.01 | Non-differentially expressed | 0.92 | 0.000319973 | 0.000460643 |

| | | | | | | | | | | |
|------------------|-----------|--|---|------|----|------|------------------------------------|-------|-------------|-------------|
| | | | | | | | genes | | | |
| <i>LOC728024</i> | 6. pseudo | | 2 | 0.03 | 14 | 0.01 | Non-differentially expressed genes | -0.17 | 0.053750399 | 0.064468445 |
| <i>ABCA17P</i> | 6. pseudo | | 2 | 0.03 | 18 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>FER1L4</i> | 6. pseudo | | 2 | 0.03 | 25 | 0.02 | #N/A | #N/A | #N/A | #N/A |
| <i>PCDHB17</i> | 6. pseudo | | 2 | 0.03 | 32 | 0.03 | #N/A | #N/A | #N/A | #N/A |
| <i>POM121L9P</i> | 6. pseudo | | 3 | 0.05 | 12 | 0.01 | #N/A | #N/A | #N/A | #N/A |
| <i>GUCY1B2</i> | 6. pseudo | | 4 | 0.07 | 16 | 0.01 | #N/A | #N/A | #N/A | #N/A |