

Table S1: Definitions for each of the genes listed in Table 1. More detail on the functionality of these genes can be found at <https://www.genecards.org>, <https://www.ncbi.nlm.nih.gov> or <https://www.uniprot.org>.

Genes Upregulated/Downregulated	Gene Name	Reference
<p>Subclass A downregulated genes: 44 key adaptive immune genes (i.e., T/B-cell related such as <i>KAT2B</i>, <i>SOS1</i>, <i>JAK2</i>, <i>GK</i>, <i>TAF1</i>, <i>PTPRC</i>, <i>MA3K7</i> etc.) in subclass A compared to B and C.</p> <p>181 key zinc biology-related genes (i.e., <i>ZnT/SLC</i>, etc) downregulated in subclass A compared to B and C</p>	<p><i>ZnT/SLC</i> – Solute carrier family (zinc transporter)</p> <p><i>KAT2B</i> – K(lysine) acetyltransferase 2B</p> <p><i>SOS1</i> – Son of sevenless homolog 1</p> <p><i>JAK2</i> – Janus kinase 2</p> <p><i>GK</i> – Glycerol kinase</p> <p><i>TAF1</i> – TAF1 1 RNA Polymerase II</p> <p><i>PTPRC</i> – Protein tyrosine phosphatase, receptor type, C</p> <p><i>MAP3K7</i> – Mitogen-activated protein kinase kinase kinase 7</p>	(33)
<p>SRS1 upregulated genes: <i>IRAK3</i>, <i>TOLLIP</i>, <i>CBL</i>, <i>PAG1</i>, <i>HIF1A</i>, <i>EPAS1</i>, <i>IL18RAP</i>, <i>CCR1</i>, <i>LDHA</i>, <i>GAPDH</i></p> <p>SRS1 downregulated genes: <i>LAT</i>, <i>CD247</i>, <i>HLA family</i>, <i>CIITA</i>, <i>RFX5</i>, <i>CCR3</i>, <i>MTOR</i>, <i>SIRT1</i>, <i>CD247</i></p> <p>SRS2 upregulated genes: HLA family class II, T-cell and B-cell complexes</p>	<p><i>IRAK3</i>- Interleukin 1 receptor associated kinase 3</p> <p><i>TOLLIP</i> - Toll interacting protein</p> <p><i>CBL</i>- Cbl proto-oncogene</p> <p><i>PAG1</i>-Phosphoprotein membrane actor with glycosphingolipid microdomains 1</p> <p><i>HIF1A</i>- Hypoxia inducible factor 1A</p> <p><i>EPAS1</i> – Endothelial PAS domain protein 1</p> <p><i>IL18RAO</i> – Interleukin 18 receptor accessory protein</p> <p><i>CCR3</i> – C-C motif chemokine receptor 3</p> <p><i>MTOR</i> – Mechanistic target of rapamycin kinase</p> <p><i>SIRT1</i> – Sirtuin 1</p> <p><i>HLA</i> – Major histocompatibility complex class 1, A</p>	(11)
<p>MARS 1 upregulated genes: <i>BPGM</i> and <i>TAP2</i></p> <p>MARS 2 upregulated genes: <i>GADD45A</i> and <i>PCGF5</i></p>	<p><i>BPGM</i> – Bisphosphoglycerate mutase</p> <p><i>TAP2</i> – Transporter 2, ATP binding cassette subfamily B member</p> <p><i>GADD45A</i> – Growth arrest and DNA</p>	(34)

<p>MARS 3 upregulated genes: <i>AHNAK</i> nucleoprotein, <i>PDCD10</i></p> <p>MARS 4 upregulated genes: <i>IFIT5</i> and <i>GLTSCR2/NOP53/NOL5A</i></p>	<p>damage inducible alpha <i>PCGF5</i> – Polycomb group ring finger 5</p> <p><i>AHNAK</i> – Neuroblast differentiation-associated protein AHNAK</p> <p><i>PDCD10</i> – Programmed cell death 10</p> <p><i>IFIT 5</i> – Interferon induced protein with tetratricopeptide repeats 5</p> <p><i>NOL5A</i>- Nucleolar protein 5A</p>	
<p>Inflammopathic upregulated genes: <i>ARG1</i>, <i>LCN2</i>, <i>LTF</i>, <i>OLFM4</i></p> <p>Inflammopathic downregulated genes: <i>HLA-DMB</i></p> <p>Adaptive upregulated genes: <i>YKT6</i>, <i>PDE4B</i>, <i>TWISTNB/POLR1F</i>, <i>BTN2A2</i></p> <p>Adaptive downregulated genes: <i>GADD45A</i>, <i>CD24</i>, <i>S100A12</i>, <i>STX1A</i></p> <p>Coagulopathic upregulated genes: <i>KCNMB4</i>, <i>CRISP2</i>, <i>HTRA1</i>, <i>PPL</i></p> <p>Coagulopathic downregulated genes: <i>RHBDF2</i>, <i>ZCCHC4</i>, <i>YKT6</i>, <i>DDX6</i></p>	<p><i>ARG1</i> – Arginase 1</p> <p><i>LCN2</i> – Lipocalin 2</p> <p><i>LTF</i> – Lactotransferrin</p> <p><i>OLFM4</i> – Olfactomedin-4</p> <p><i>HLA-DMB</i> – Major histocompatibility complex, class II, DM beta</p> <p><i>YKT6</i> – YKT6 v-SNARE Homolog</p> <p><i>PDE4B</i> – Phosphodiesterase 4b</p> <p><i>POLR1F</i> – RNA polymerase 1 subunit F</p> <p><i>BTN2A2</i> – Butyrophilin subfamily 2 member A2</p> <p><i>GADD45A</i> – Growth arrest and DNA damage inducible alpha</p> <p><i>CD24</i> – Cluster of differentiation 24</p> <p><i>S100A12</i> - S100 calcium binding protein A12</p> <p><i>STX1A</i> – Syntaxin 1A</p> <p><i>KCNMB4</i> – Potassium calcium-activated channel subfamily M regulatory beta subunit 4</p> <p><i>CRISP2</i> – Cysteine rich secretory protein 2</p> <p><i>HTRA1</i> – High-temperature requirement A serine peptidase 1</p>	(35)

	<p><i>PPL</i> – Periplakin</p> <p><i>RHBDF2</i> – Rhomboid 5 homolog 2</p> <p><i>ZCCHC4</i> – Zinc finger CCHC-type containing 4</p> <p><i>YKT6</i> – YKT6 v-SNARE homolog</p> <p><i>DDX6</i> – DEAD-box helicase 6</p>	
<p>Alpha upregulated genes: <i>IL10</i></p> <p>Alpha downregulated genes: <i>D-dimer, IL6, IL8, TNFa</i>, Procalcitonin, C-reactive protein</p> <p>Beta upregulated genes: <i>IGFBP7, COL4, TIMP2</i></p> <p>Beta downregulated genes: <i>IL10, IL66</i>, Procalcitonin, <i>SELE, PAII</i></p> <p>Gamma upregulated genes: <i>IL6, KIMI/HAVCRI</i>, Procalcitonin, <i>PAII, ICAMI, SELE</i></p> <p>Delta upregulated genes: <i>IL10, IL6, IL8</i>, Procalcitonin, <i>TNFa, COL4, D-dimer, PAII, VCAMI</i>, TAT complex</p>	<p><i>IL10</i> – Interleukin 10</p> <p><i>IL6</i> – Interleukin 6</p> <p><i>IL8</i> – Interleukin 8</p> <p><i>TNFa</i> – Tumor necrosis factor-alpha</p> <p><i>IGFBP7</i> – Insulin like growth factor binding protein 7</p> <p><i>COL4</i> – Collagen type IV</p> <p><i>TIMP2</i> – Tissue inhibitor of metalloproteinase 2</p> <p><i>IL66</i> – Interleukin 66</p> <p><i>SELE</i> – Selectin E</p> <p><i>PAII</i> – Plasminogen activator inhibitor 1</p> <p><i>HAVCRI</i> - Hepatitis A virus cell receptor 1</p> <p><i>ICAMI</i> - Intercellular adhesion molecule 1</p> <p><i>TAT</i> – Tyrosine aminotransferase</p>	(5)