

Supplementary table of genes:

| Gene Symbol | Gene Name   | Panel                            |
|-------------|---|----------------------------------|
| A2M         | alpha-2-macroglobulin   | PanCancer<br>Immune<br>Profiling |
| ABCB1       | ATP-binding cassette, sub-family B (MDR/TAP), member 1                  | PanCancer<br>Immune<br>Profiling |
| ABL1        | c-abl oncogene 1, non-receptor tyrosine kinase                          | PanCancer<br>Immune<br>Profiling |
| ADA         | adenosine deaminase   | PanCancer<br>Immune<br>Profiling |
| ADORA2A     | adenosine A2a receptor  | PanCancer<br>Immune<br>Profiling |
| AICDA       | activation-induced cytidine deaminase                                   | PanCancer<br>Immune<br>Profiling |
| AIRE        | autoimmune regulator  | PanCancer<br>Immune<br>Profiling |
| AKT3        | v-akt murine thymoma viral oncogene homolog 3 (protein kinase B, gamma) | PanCancer<br>Immune<br>Profiling |
| ALCAM       | activated leukocyte cell adhesion molecule                              | PanCancer<br>Immune<br>Profiling |
| AMBP        | alpha-1-microglobulin/bikunin precursor                                 | PanCancer<br>Immune<br>Profiling |
| AMICA1      | adhesion molecule, interacts with CXADR antigen 1                       | PanCancer<br>Immune<br>Profiling |
| ANP32B      | acidic (leucine-rich) nuclear phosphoprotein 32 family, member B        | PanCancer<br>Immune<br>Profiling |
| ANXA1       | annexin A1  | PanCancer<br>Immune<br>Profiling |
| APOE        | apolipoprotein E  | PanCancer<br>Immune<br>Profiling |

|         |  |                                  |
|---------|--|----------------------------------|
| APP     | amyloid beta (A4) precursor protein                  | PanCancer<br>Immune<br>Profiling |
| ARG1    | arginase, liver                                      | PanCancer<br>Immune<br>Profiling |
| ARG2    | arginase, type II                                    | PanCancer<br>Immune<br>Profiling |
| ATF1    | activating transcription factor 1                    | PanCancer<br>Immune<br>Profiling |
| ATF2    | activating transcription factor 2                    | PanCancer<br>Immune<br>Profiling |
| ATG10   | autophagy related 10                                 | PanCancer<br>Immune<br>Profiling |
| ATG12   | autophagy related 12                                 | PanCancer<br>Immune<br>Profiling |
| ATG16L1 | autophagy related 16-like 1 ( <i>S. cerevisiae</i> ) | PanCancer<br>Immune<br>Profiling |
| ATG5    | autophagy related 5                                  | PanCancer<br>Immune<br>Profiling |
| ATG7    | autophagy related 7                                  | PanCancer<br>Immune<br>Profiling |
| ATM     | ataxia telangiectasia mutated                        | PanCancer<br>Immune<br>Profiling |
| AXL     | AXL receptor tyrosine kinase                         | PanCancer<br>Immune<br>Profiling |
| BAGE    | B melanoma antigen                                   | PanCancer<br>Immune<br>Profiling |
| BATF    | basic leucine zipper transcription factor, ATF-like  | PanCancer<br>Immune<br>Profiling |
| BAX     | BCL2-associated X protein                            | PanCancer<br>Immune<br>Profiling |

|        |   |                            |
|--------|---|----------------------------|
| BCL10  | B-cell CLL/lymphoma 10                          | PanCancer Immune Profiling |
| BCL2   | B-cell CLL/lymphoma 2                           | PanCancer Immune Profiling |
| BCL2L1 | BCL2-like 1                                     | PanCancer Immune Profiling |
| BCL6   | B-cell CLL/lymphoma 6                           | PanCancer Immune Profiling |
| BID    | BH3 interacting domain death agonist            | PanCancer Immune Profiling |
| BIRC5  | baculoviral IAP repeat containing 5             | PanCancer Immune Profiling |
| BLK    | B lymphoid tyrosine kinase                      | PanCancer Immune Profiling |
| BLNK   | B-cell linker                                   | PanCancer Immune Profiling |
| BMI1   | BMI1 polycomb ring finger oncogene              | PanCancer Immune Profiling |
| BST1   | bone marrow stromal cell antigen 1              | PanCancer Immune Profiling |
| BST2   | bone marrow stromal cell antigen 2              | PanCancer Immune Profiling |
| BTK    | Bruton agammaglobulinemia tyrosine kinase       | PanCancer Immune Profiling |
| BTLA   | B and T lymphocyte associated                   | PanCancer Immune Profiling |
| C1QA   | complement component 1, q subcomponent, A chain | PanCancer Immune Profiling |
| C1QB   | complement component 1, q subcomponent, B chain | PanCancer Immune Profiling |

|       |  |                                  |
|-------|--|----------------------------------|
| C1QBP | complement component 1, q subcomponent binding protein | PanCancer<br>Immune<br>Profiling |
| C1R   | complement component 1, r subcomponent                 | PanCancer<br>Immune<br>Profiling |
| C1S   | complement component 1, s subcomponent                 | PanCancer<br>Immune<br>Profiling |
| C2    | complement component 2                                 | PanCancer<br>Immune<br>Profiling |
| C3    | complement component 3                                 | PanCancer<br>Immune<br>Profiling |
| C3AR1 | complement component 3a receptor 1                     | PanCancer<br>Immune<br>Profiling |
| C4B   | complement component 4B (Chido blood group)            | PanCancer<br>Immune<br>Profiling |
| C4BPA | complement component 4 binding protein, alpha          | PanCancer<br>Immune<br>Profiling |
| C5    | complement component 5                                 | PanCancer<br>Immune<br>Profiling |
| C6    | complement component 6                                 | PanCancer<br>Immune<br>Profiling |
| C7    | complement component 7                                 | PanCancer<br>Immune<br>Profiling |
| C8A   | complement component 8, alpha polypeptide              | PanCancer<br>Immune<br>Profiling |
| C8B   | complement component 8, beta polypeptide               | PanCancer<br>Immune<br>Profiling |
| C8G   | complement component 8, gamma polypeptide              | PanCancer<br>Immune<br>Profiling |
| C9    | complement component 9                                 | PanCancer<br>Immune<br>Profiling |

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|--------|--|----------------------------------|
| CAMP   | cathelicidin antimicrobial peptide                                   | PanCancer<br>Immune<br>Profiling |
| CARD11 | caspase recruitment domain family, member 11                         | PanCancer<br>Immune<br>Profiling |
| CARD9  | caspase recruitment domain family, member 9                          | PanCancer<br>Immune<br>Profiling |
| CASP1  | caspase 1, apoptosis-related cysteine peptidase                      | PanCancer<br>Immune<br>Profiling |
| CASP10 | caspase 10, apoptosis-related cysteine peptidase                     | PanCancer<br>Immune<br>Profiling |
| CASP3  | caspase 3, apoptosis-related cysteine peptidase                      | PanCancer<br>Immune<br>Profiling |
| CASP8  | caspase 8, apoptosis-related cysteine peptidase                      | PanCancer<br>Immune<br>Profiling |
| CCL1   | chemokine (C-C motif) ligand 1                                       | PanCancer<br>Immune<br>Profiling |
| CCL11  | chemokine (C-C motif) ligand 11                                      | PanCancer<br>Immune<br>Profiling |
| CCL13  | chemokine (C-C motif) ligand 13                                      | PanCancer<br>Immune<br>Profiling |
| CCL14  | chemokine (C-C motif) ligand 14                                      | PanCancer<br>Immune<br>Profiling |
| CCL15  | chemokine (C-C motif) ligand 15                                      | PanCancer<br>Immune<br>Profiling |
| CCL16  | chemokine (C-C motif) ligand 16                                      | PanCancer<br>Immune<br>Profiling |
| CCL17  | chemokine (C-C motif) ligand 17                                      | PanCancer<br>Immune<br>Profiling |
| CCL18  | chemokine (C-C motif) ligand 18 (pulmonary and activation-regulated) | PanCancer<br>Immune<br>Profiling |

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|--------|---------------------------------------|----------------------------|
| CCL19  | chemokine (C-C motif) ligand 19       | PanCancer Immune Profiling |
| CCL2   | chemokine (C-C motif) ligand 2        | PanCancer Immune Profiling |
| CCL20  | chemokine (C-C motif) ligand 20       | PanCancer Immune Profiling |
| CCL21  | chemokine (C-C motif) ligand 21       | PanCancer Immune Profiling |
| CCL22  | chemokine (C-C motif) ligand 22       | PanCancer Immune Profiling |
| CCL23  | chemokine (C-C motif) ligand 23       | PanCancer Immune Profiling |
| CCL24  | chemokine (C-C motif) ligand 24       | PanCancer Immune Profiling |
| CCL25  | chemokine (C-C motif) ligand 25       | PanCancer Immune Profiling |
| CCL26  | chemokine (C-C motif) ligand 26       | PanCancer Immune Profiling |
| CCL27  | chemokine (C-C motif) ligand 27       | PanCancer Immune Profiling |
| CCL28  | chemokine (C-C motif) ligand 28       | PanCancer Immune Profiling |
| CCL3   | chemokine (C-C motif) ligand 3        | PanCancer Immune Profiling |
| CCL3L1 | chemokine (C-C motif) ligand 3-like 1 | PanCancer Immune Profiling |
| CCL4   | chemokine (C-C motif) ligand 4        | PanCancer Immune Profiling |
| CCL5   | chemokine (C-C motif) ligand 5        | PanCancer Immune Profiling |

|       |  |                                  |
|-------|--|----------------------------------|
| CCL7  | chemokine (C-C motif) ligand 7                     | PanCancer<br>Immune<br>Profiling |
| CCL8  | chemokine (C-C motif) ligand 8                     | PanCancer<br>Immune<br>Profiling |
| CCND3 | cyclin D3  | PanCancer<br>Immune<br>Profiling |
| CCR1  | chemokine (C-C motif) receptor 1                   | PanCancer<br>Immune<br>Profiling |
| CCR2  | chemokine (C-C motif) receptor 2                   | PanCancer<br>Immune<br>Profiling |
| CCR3  | chemokine (C-C motif) receptor 3                   | PanCancer<br>Immune<br>Profiling |
| CCR4  | chemokine (C-C motif) receptor 4                   | PanCancer<br>Immune<br>Profiling |
| CCR5  | chemokine (C-C motif) receptor 5 (gene/pseudogene) | PanCancer<br>Immune<br>Profiling |
| CCR6  | chemokine (C-C motif) receptor 6                   | PanCancer<br>Immune<br>Profiling |
| CCR7  | chemokine (C-C motif) receptor 7                   | PanCancer<br>Immune<br>Profiling |
| CCR9  | chemokine (C-C motif) receptor 9                   | PanCancer<br>Immune<br>Profiling |
| CCRL2 | chemokine (C-C motif) receptor-like 2              | PanCancer<br>Immune<br>Profiling |
| CD14  | CD14 molecule                                      | PanCancer<br>Immune<br>Profiling |
| CD160 | CD160 molecule                                     | PanCancer<br>Immune<br>Profiling |
| CD163 | CD163 molecule                                     | PanCancer<br>Immune<br>Profiling |

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|-------|--|----------------------------|
| CD164 | CD164 molecule, sialomucin                       | PanCancer Immune Profiling |
| CD180 | CD180 molecule                                   | PanCancer Immune Profiling |
| CD19  | CD19 molecule                                    | PanCancer Immune Profiling |
| CD1A  | CD1a molecule                                    | PanCancer Immune Profiling |
| CD1B  | CD1b molecule                                    | PanCancer Immune Profiling |
| CD1C  | CD1c molecule                                    | PanCancer Immune Profiling |
| CD1D  | CD1d molecule                                    | PanCancer Immune Profiling |
| CD1E  | CD1e molecule                                    | PanCancer Immune Profiling |
| CD2   | CD2 molecule                                     | PanCancer Immune Profiling |
| CD200 | CD200 molecule                                   | PanCancer Immune Profiling |
| CD207 | CD207 molecule, langerin                         | PanCancer Immune Profiling |
| CD209 | CD209 molecule                                   | PanCancer Immune Profiling |
| CD22  | CD22 molecule                                    | PanCancer Immune Profiling |
| CD24  | CD24 molecule                                    | PanCancer Immune Profiling |
| CD244 | CD244 molecule, natural killer cell receptor 2B4 | PanCancer Immune Profiling |



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|--------|---|----------------------------------|
| CD247  | CD247 molecule                            | PanCancer<br>Immune<br>Profiling |
| CD27   | CD27 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD274  | CD274 molecule                            | PanCancer<br>Immune<br>Profiling |
| CD276  | CD276 molecule                            | PanCancer<br>Immune<br>Profiling |
| CD28   | CD28 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD33   | CD33 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD34   | CD34 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD36   | CD36 molecule (thrombospondin receptor)   | PanCancer<br>Immune<br>Profiling |
| CD37   | CD37 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD38   | CD38 molecule                             | PanCancer<br>Immune<br>Profiling |
| CD3D   | CD3d molecule, delta (CD3-TCR complex)    | PanCancer<br>Immune<br>Profiling |
| CD3E   | CD3e molecule, epsilon (CD3-TCR complex)  | PanCancer<br>Immune<br>Profiling |
| CD3EAP | CD3e molecule, epsilon associated protein | PanCancer<br>Immune<br>Profiling |
| CD3G   | CD3g molecule, gamma (CD3-TCR complex)    | PanCancer<br>Immune<br>Profiling |
| CD4    | CD4 molecule                              | PanCancer<br>Immune<br>Profiling |

|        |  |                            |
|--------|--|----------------------------|
| CD40   | CD40 molecule, TNF receptor superfamily member 5                             | PanCancer Immune Profiling |
| CD40LG | CD40 ligand  | PanCancer Immune Profiling |
| CD44   | CD44 molecule (Indian blood group)   | PanCancer Immune Profiling |
| CD46   | CD46 molecule, complement regulatory protein                                 | PanCancer Immune Profiling |
| CD47   | CD47 molecule  | PanCancer Immune Profiling |
| CD48   | CD48 molecule  | PanCancer Immune Profiling |
| CD5    | CD5 molecule   | PanCancer Immune Profiling |
| CD53   | CD53 molecule  | PanCancer Immune Profiling |
| CD55   | CD55 molecule, decay accelerating factor for complement (Cromer blood group) | PanCancer Immune Profiling |
| CD58   | CD58 molecule  | PanCancer Immune Profiling |
| CD59   | CD59 molecule, complement regulatory protein                                 | PanCancer Immune Profiling |
| CD6    | CD6 molecule   | PanCancer Immune Profiling |
| CD63   | CD63 molecule  | PanCancer Immune Profiling |
| CD68   | CD68 molecule  | PanCancer Immune Profiling |
| CD7    | CD7 molecule   | PanCancer Immune Profiling |

|       |   |                                  |
|-------|---|----------------------------------|
| CD70  | CD70 molecule   | PanCancer<br>Immune<br>Profiling |
| CD74  | CD74 molecule, major histocompatibility complex, class II invariant chain | PanCancer<br>Immune<br>Profiling |
| CD79A | CD79a molecule, immunoglobulin-associated alpha                           | PanCancer<br>Immune<br>Profiling |
| CD79B | CD79b molecule, immunoglobulin-associated beta                            | PanCancer<br>Immune<br>Profiling |
| CD80  | CD80 molecule   | PanCancer<br>Immune<br>Profiling |
| CD81  | CD81 molecule   | PanCancer<br>Immune<br>Profiling |
| CD83  | CD83 molecule   | PanCancer<br>Immune<br>Profiling |
| CD84  | CD84 molecule   | PanCancer<br>Immune<br>Profiling |
| CD86  | CD86 molecule   | PanCancer<br>Immune<br>Profiling |
| CD8A  | CD8a molecule   | PanCancer<br>Immune<br>Profiling |
| CD8B  | CD8b molecule   | PanCancer<br>Immune<br>Profiling |
| CD9   | CD9 molecule  | PanCancer<br>Immune<br>Profiling |
| CD96  | CD96 molecule   | PanCancer<br>Immune<br>Profiling |
| CD97  | CD97 molecule   | PanCancer<br>Immune<br>Profiling |
| CD99  | CD99 molecule   | PanCancer<br>Immune<br>Profiling |

|         |   |                            |
|---------|---|----------------------------|
| CDH1    | cadherin 1, type 1, E-cadherin (epithelial)   | PanCancer Immune Profiling |
| CDH5    | cadherin 5, type 2 (vascular endothelium)   | PanCancer Immune Profiling |
| CDK1    | cyclin-dependent kinase 1   | PanCancer Immune Profiling |
| CDKN1A  | cyclin-dependent kinase inhibitor 1A (p21, Cip1)  | PanCancer Immune Profiling |
| CEACAM1 | carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein)                | PanCancer Immune Profiling |
| CEACAM6 | carcinoembryonic antigen-related cell adhesion molecule 6 (non-specific cross reacting antigen) | PanCancer Immune Profiling |
| CEACAM8 | carcinoembryonic antigen-related cell adhesion molecule 8                                       | PanCancer Immune Profiling |
| CEBPB   | CCAAT/enhancer binding protein (C/EBP), beta  | PanCancer Immune Profiling |
| CFB     | complement factor B   | PanCancer Immune Profiling |
| CFD     | complement factor D (adipsin)   | PanCancer Immune Profiling |
| CFI     | complement factor I   | PanCancer Immune Profiling |
| CFP     | complement factor properdin   | PanCancer Immune Profiling |
| CHIT1   | chitinase 1 (chitotriosidase)   | PanCancer Immune Profiling |
| CHUK    | conserved helix-loop-helix ubiquitous kinase  | PanCancer Immune Profiling |
| CKLF    | chemokine-like factor   | PanCancer Immune Profiling |

|         |   |                                  |
|---------|---|----------------------------------|
| CLEC4A  | C-type lectin domain family 4, member A                     | PanCancer<br>Immune<br>Profiling |
| CLEC4C  | C-type lectin domain family 4, member C                     | PanCancer<br>Immune<br>Profiling |
| CLEC5A  | C-type lectin domain family 5, member A                     | PanCancer<br>Immune<br>Profiling |
| CLEC6A  | C-type lectin domain family 6, member A                     | PanCancer<br>Immune<br>Profiling |
| CLEC7A  | C-type lectin domain family 7, member A                     | PanCancer<br>Immune<br>Profiling |
| CLU     | clusterin   | PanCancer<br>Immune<br>Profiling |
| CMA1    | chymase 1, mast cell  | PanCancer<br>Immune<br>Profiling |
| CMKLR1  | chemokine-like receptor 1                                   | PanCancer<br>Immune<br>Profiling |
| COL3A1  | collagen, type III, alpha 1                                 | PanCancer<br>Immune<br>Profiling |
| COLEC12 | collectin sub-family member 12                              | PanCancer<br>Immune<br>Profiling |
| CR1     | complement component (3b/4b) receptor 1 (Knops blood group) | PanCancer<br>Immune<br>Profiling |
| CR2     | complement component (3d/Epstein Barr virus) receptor 2     | PanCancer<br>Immune<br>Profiling |
| CREB1   | cAMP responsive element binding protein 1                   | PanCancer<br>Immune<br>Profiling |
| CREB5   | cAMP responsive element binding protein 5                   | PanCancer<br>Immune<br>Profiling |
| CREBBP  | CREB binding protein  | PanCancer<br>Immune<br>Profiling |

|        |   |                            |
|--------|---|----------------------------|
| CRP    | C-reactive protein, pentraxin-related   | PanCancer Immune Profiling |
| CSF1   | colony stimulating factor 1 (macrophage)  | PanCancer Immune Profiling |
| CSF1R  | colony stimulating factor 1 receptor  | PanCancer Immune Profiling |
| CSF2   | colony stimulating factor 2 (granulocyte-macrophage)                              | PanCancer Immune Profiling |
| CSF2RB | colony stimulating factor 2 receptor, beta, low-affinity (granulocyte-macrophage) | PanCancer Immune Profiling |
| CSF3   | colony stimulating factor 3 (granulocyte)   | PanCancer Immune Profiling |
| CSF3R  | colony stimulating factor 3 receptor (granulocyte)                                | PanCancer Immune Profiling |
| CT45A1 | cancer/testis antigen family 45, member A1  | PanCancer Immune Profiling |
| CTAG1B | cancer/testis antigen 1B  | PanCancer Immune Profiling |
| CTAGE1 | cutaneous T-cell lymphoma-associated antigen 1                                    | PanCancer Immune Profiling |
| CTCF   | CCCTC-binding factor (zinc finger protein)-like                                   | PanCancer Immune Profiling |
| CTLA4  | cytotoxic T-lymphocyte-associated protein 4                                       | PanCancer Immune Profiling |
| CTSG   | cathepsin G   | PanCancer Immune Profiling |
| CTSH   | cathepsin H   | PanCancer Immune Profiling |
| CTSL   | cathepsin L   | PanCancer Immune Profiling |

|        |  |                                  |
|--------|--|----------------------------------|
| CTSS   | cathepsin S  | PanCancer<br>Immune<br>Profiling |
| CTSW   | cathepsin W  | PanCancer<br>Immune<br>Profiling |
| CX3CL1 | chemokine (C-X3-C motif) ligand 1  | PanCancer<br>Immune<br>Profiling |
| CX3CR1 | chemokine (C-X3-C motif) receptor 1  | PanCancer<br>Immune<br>Profiling |
| CXCL1  | chemokine (C-X-C motif) ligand 1 (melanoma growth stimulating activity, alpha) | PanCancer<br>Immune<br>Profiling |
| CXCL10 | chemokine (C-X-C motif) ligand 10  | PanCancer<br>Immune<br>Profiling |
| CXCL11 | chemokine (C-X-C motif) ligand 11  | PanCancer<br>Immune<br>Profiling |
| CXCL12 | chemokine (C-X-C motif) ligand 12  | PanCancer<br>Immune<br>Profiling |
| CXCL13 | chemokine (C-X-C motif) ligand 13  | PanCancer<br>Immune<br>Profiling |
| CXCL14 | chemokine (C-X-C motif) ligand 14  | PanCancer<br>Immune<br>Profiling |
| CXCL16 | chemokine (C-X-C motif) ligand 16  | PanCancer<br>Immune<br>Profiling |
| CXCL2  | chemokine (C-X-C motif) ligand 2   | PanCancer<br>Immune<br>Profiling |
| CXCL3  | chemokine (C-X-C motif) ligand 3   | PanCancer<br>Immune<br>Profiling |
| CXCL5  | chemokine (C-X-C motif) ligand 5   | PanCancer<br>Immune<br>Profiling |
| CXCL6  | chemokine (C-X-C motif) ligand 6 (granulocyte chemotactic protein 2)           | PanCancer<br>Immune<br>Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| CXCL8  | chemokine (C-X-C motif) ligand 8          | PanCancer<br>Immune<br>Profiling |
| CXCL9  | chemokine (C-X-C motif) ligand 9          | PanCancer<br>Immune<br>Profiling |
| CXCR1  | chemokine (C-X-C motif) receptor 1        | PanCancer<br>Immune<br>Profiling |
| CXCR2  | chemokine (C-X-C motif) receptor 2        | PanCancer<br>Immune<br>Profiling |
| CXCR3  | chemokine (C-X-C motif) receptor 3        | PanCancer<br>Immune<br>Profiling |
| CXCR4  | chemokine (C-X-C motif) receptor 4        | PanCancer<br>Immune<br>Profiling |
| CXCR5  | chemokine (C-X-C motif) receptor 5        | PanCancer<br>Immune<br>Profiling |
| CXCR6  | chemokine (C-X-C motif) receptor 6        | PanCancer<br>Immune<br>Profiling |
| CYBB   | cytochrome b-245, beta polypeptide        | PanCancer<br>Immune<br>Profiling |
| CYFIP2 | cytoplasmic FMR1 interacting protein 2    | PanCancer<br>Immune<br>Profiling |
| CYLD   | cylindromatosis (turban tumor syndrome)   | PanCancer<br>Immune<br>Profiling |
| DDX43  | DEAD (Asp-Glu-Ala-Asp) box polypeptide 43 | PanCancer<br>Immune<br>Profiling |
| DDX58  | DEAD (Asp-Glu-Ala-Asp) box polypeptide 58 | PanCancer<br>Immune<br>Profiling |
| DEFB1  | defensin, beta 1                          | PanCancer<br>Immune<br>Profiling |
| DMBT1  | deleted in malignant brain tumors 1       | PanCancer<br>Immune<br>Profiling |



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|--------|--|----------------------------------|
| DOCK9  | dedicator of cytokinesis 9                       | PanCancer<br>Immune<br>Profiling |
| DPP4   | dipeptidyl-peptidase 4                           | PanCancer<br>Immune<br>Profiling |
| DUSP4  | dual specificity phosphatase 4                   | PanCancer<br>Immune<br>Profiling |
| DUSP6  | dual specificity phosphatase 6                   | PanCancer<br>Immune<br>Profiling |
| EBI3   | Epstein-Barr virus induced 3                     | PanCancer<br>Immune<br>Profiling |
| ECSIT  | ECSIT homolog (Drosophila)                       | PanCancer<br>Immune<br>Profiling |
| EGR1   | early growth response 1                          | PanCancer<br>Immune<br>Profiling |
| EGR2   | early growth response 2                          | PanCancer<br>Immune<br>Profiling |
| ELANE  | elastase, neutrophil expressed                   | PanCancer<br>Immune<br>Profiling |
| ELK1   | ELK1, member of ETS oncogene family              | PanCancer<br>Immune<br>Profiling |
| ENG    | endoglin   | PanCancer<br>Immune<br>Profiling |
| ENTPD1 | ectonucleoside triphosphate diphosphohydrolase 1 | PanCancer<br>Immune<br>Profiling |
| EOMES  | eomesodermin                                     | PanCancer<br>Immune<br>Profiling |
| EP300  | E1A binding protein p300                         | PanCancer<br>Immune<br>Profiling |
| EPCAM  | epithelial cell adhesion molecule                | PanCancer<br>Immune<br>Profiling |

|        |  |                            |
|--------|--|----------------------------|
| ETS1   | v-ets erythroblastosis virus E26 oncogene homolog 1 (avian)          | PanCancer Immune Profiling |
| EWSR1  | Ewing sarcoma breakpoint region 1                                    | PanCancer Immune Profiling |
| F12    | coagulation factor XII (Hageman factor)                              | PanCancer Immune Profiling |
| F13A1  | coagulation factor XIII, A1 polypeptide                              | PanCancer Immune Profiling |
| F2RL1  | coagulation factor II (thrombin) receptor-like 1                     | PanCancer Immune Profiling |
| FADD   | Fas (TNFRSF6)-associated via death domain                            | PanCancer Immune Profiling |
| FAS    | Fas (TNF receptor superfamily, member 6)                             | PanCancer Immune Profiling |
| FCER1A | Fc fragment of IgE, high affinity I, receptor for; alpha polypeptide | PanCancer Immune Profiling |
| FCER1G | Fc fragment of IgE, high affinity I, receptor for; gamma polypeptide | PanCancer Immune Profiling |
| FCER2  | Fc fragment of IgE, low affinity II, receptor for (CD23)             | PanCancer Immune Profiling |
| FCGR1A | Fc fragment of IgG, high affinity Ia, receptor (CD64)                | PanCancer Immune Profiling |
| FCGR2A | Fc fragment of IgG, low affinity IIa, receptor (CD32)                | PanCancer Immune Profiling |
| FCGR2B | Fc fragment of IgG, low affinity IIb, receptor (CD32)                | PanCancer Immune Profiling |
| FCGR3A | Fc fragment of IgG, low affinity IIIa, receptor (CD16a)              | PanCancer Immune Profiling |
| FEZ1   | fasciculation and elongation protein zeta 1 (zygin I)                | PanCancer Immune Profiling |

|        |  |                                  |
|--------|--|----------------------------------|
| FLT3   | fms-related tyrosine kinase 3                                  | PanCancer<br>Immune<br>Profiling |
| FLT3LG | fms-related tyrosine kinase 3 ligand                           | PanCancer<br>Immune<br>Profiling |
| FN1    | fibronectin 1  | PanCancer<br>Immune<br>Profiling |
| FOS    | FBJ murine osteosarcoma viral oncogene homolog                 | PanCancer<br>Immune<br>Profiling |
| FOXJ1  | forkhead box J1  | PanCancer<br>Immune<br>Profiling |
| FOXP3  | forkhead box P3  | PanCancer<br>Immune<br>Profiling |
| FPR2   | formyl peptide receptor 2                                      | PanCancer<br>Immune<br>Profiling |
| FUT5   | fucosyltransferase 5 (alpha (1,3) fucosyltransferase)          | PanCancer<br>Immune<br>Profiling |
| FUT7   | fucosyltransferase 7 (alpha (1,3) fucosyltransferase)          | PanCancer<br>Immune<br>Profiling |
| FYN    | FYN oncogene related to SRC, FGR, YES                          | PanCancer<br>Immune<br>Profiling |
| GAGE1  | G antigen 1  | PanCancer<br>Immune<br>Profiling |
| GATA3  | GATA binding protein 3   | PanCancer<br>Immune<br>Profiling |
| GNLY   | granulysin   | PanCancer<br>Immune<br>Profiling |
| GPI    | glucose-6-phosphate isomerase                                  | PanCancer<br>Immune<br>Profiling |
| GTF3C1 | general transcription factor IIIc, polypeptide 1, alpha 220kDa | PanCancer<br>Immune<br>Profiling |

|          |  |                            |
|----------|--|----------------------------|
| GZMA     | granzyme A (granzyme 1, cytotoxic T-lymphocyte-associated serine esterase 3) | PanCancer Immune Profiling |
| GZMB     | granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1) | PanCancer Immune Profiling |
| GZMH     | granzyme H (cathepsin G-like 2, protein h-CCPX)                              | PanCancer Immune Profiling |
| GZMK     | granzyme K (granzyme 3; tryptase II)   | PanCancer Immune Profiling |
| GZMM     | granzyme M (lymphocyte met-ase 1)  | PanCancer Immune Profiling |
| HAMP     | hepcidin antimicrobial peptide   | PanCancer Immune Profiling |
| HAVCR2   | hepatitis A virus cellular receptor 2  | PanCancer Immune Profiling |
| HCK      | hemopoietic cell kinase  | PanCancer Immune Profiling |
| HLA-A    | major histocompatibility complex, class I, A                                 | PanCancer Immune Profiling |
| HLA-B    | major histocompatibility complex, class I, B                                 | PanCancer Immune Profiling |
| HLA-C    | major histocompatibility complex, class I, C                                 | PanCancer Immune Profiling |
| HLA-DMA  | major histocompatibility complex, class II, DM alpha                         | PanCancer Immune Profiling |
| HLA-DMB  | major histocompatibility complex, class II, DM beta                          | PanCancer Immune Profiling |
| HLA-DOB  | major histocompatibility complex, class II, DO beta                          | PanCancer Immune Profiling |
| HLA-DPA1 | major histocompatibility complex, class II, DP alpha 1                       | PanCancer Immune Profiling |

|          |  |                            |
|----------|--|----------------------------|
| HLA-DPB1 | major histocompatibility complex, class II, DP beta 1              | PanCancer Immune Profiling |
| HLA-DQA1 | major histocompatibility complex, class II, DQ alpha 1             | PanCancer Immune Profiling |
| HLA-DQB1 | major histocompatibility complex, class II, DQ beta 1              | PanCancer Immune Profiling |
| HLA-DRA  | major histocompatibility complex, class II, DR alpha               | PanCancer Immune Profiling |
| HLA-DRB3 | major histocompatibility complex, class II, DR beta 3              | PanCancer Immune Profiling |
| HLA-DRB4 | major histocompatibility complex, class II, DR beta 4              | PanCancer Immune Profiling |
| HLA-E    | major histocompatibility complex, class I, E                       | PanCancer Immune Profiling |
| HLA-G    | major histocompatibility complex, class I, G                       | PanCancer Immune Profiling |
| HMGB1    | high mobility group box 1  | PanCancer Immune Profiling |
| HRAS     | v-Ha-ras Harvey rat sarcoma viral oncogene homolog                 | PanCancer Immune Profiling |
| HSD11B1  | hydroxysteroid (11-beta) dehydrogenase 1                           | PanCancer Immune Profiling |
| ICAM1    | intercellular adhesion molecule 1                                  | PanCancer Immune Profiling |
| ICAM2    | intercellular adhesion molecule 2                                  | PanCancer Immune Profiling |
| ICAM3    | intercellular adhesion molecule 3                                  | PanCancer Immune Profiling |
| ICAM4    | intercellular adhesion molecule 4 (Landsteiner-Wiener blood group) | PanCancer Immune Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| ICOS   | inducible T-cell co-stimulator                              | PanCancer<br>Immune<br>Profiling |
| ICOSLG | inducible T-cell co-stimulator ligand                       | PanCancer<br>Immune<br>Profiling |
| IDO1   | indoleamine 2,3-dioxygenase 1                               | PanCancer<br>Immune<br>Profiling |
| IFI16  | interferon, gamma-inducible protein 16                      | PanCancer<br>Immune<br>Profiling |
| IFI27  | interferon, alpha-inducible protein 27                      | PanCancer<br>Immune<br>Profiling |
| IFI35  | interferon-induced protein 35                               | PanCancer<br>Immune<br>Profiling |
| IFIH1  | interferon induced with helicase C domain 1                 | PanCancer<br>Immune<br>Profiling |
| IFIT1  | interferon-induced protein with tetratricopeptide repeats 1 | PanCancer<br>Immune<br>Profiling |
| IFIT2  | interferon-induced protein with tetratricopeptide repeats 2 | PanCancer<br>Immune<br>Profiling |
| IFITM1 | interferon induced transmembrane protein 1                  | PanCancer<br>Immune<br>Profiling |
| IFITM2 | interferon induced transmembrane protein 2                  | PanCancer<br>Immune<br>Profiling |
| IFNA1  | interferon, alpha 1   | PanCancer<br>Immune<br>Profiling |
| IFNA17 | interferon, alpha 17  | PanCancer<br>Immune<br>Profiling |
| IFNA2  | interferon, alpha 2   | PanCancer<br>Immune<br>Profiling |
| IFNA7  | interferon, alpha 7   | PanCancer<br>Immune<br>Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| IFNA8  | interferon, alpha 8   | PanCancer<br>Immune<br>Profiling |
| IFNAR1 | interferon (alpha, beta and omega) receptor 1                                 | PanCancer<br>Immune<br>Profiling |
| IFNAR2 | interferon (alpha, beta and omega) receptor 2                                 | PanCancer<br>Immune<br>Profiling |
| IFNB1  | interferon, beta 1, fibroblast  | PanCancer<br>Immune<br>Profiling |
| IFNG   | interferon, gamma   | PanCancer<br>Immune<br>Profiling |
| IFNGR1 | interferon gamma receptor 1   | PanCancer<br>Immune<br>Profiling |
| IFNL1  | interferon lambda 1   | PanCancer<br>Immune<br>Profiling |
| IFNL2  | interferon lambda 2   | PanCancer<br>Immune<br>Profiling |
| IGF1R  | insulin-like growth factor 1 receptor   | PanCancer<br>Immune<br>Profiling |
| IGF2R  | insulin-like growth factor 2 receptor   | PanCancer<br>Immune<br>Profiling |
| IGLL1  | immunoglobulin lambda-like polypeptide 1                                      | PanCancer<br>Immune<br>Profiling |
| IKBKB  | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta    | PanCancer<br>Immune<br>Profiling |
| IKBKE  | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase epsilon | PanCancer<br>Immune<br>Profiling |
| IKBKG  | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma   | PanCancer<br>Immune<br>Profiling |
| IL10   | interleukin 10  | PanCancer<br>Immune<br>Profiling |

|         |   |                            |
|---------|---|----------------------------|
| IL10RA  | interleukin 10 receptor, alpha  | PanCancer Immune Profiling |
| IL11    | interleukin 11  | PanCancer Immune Profiling |
| IL11RA  | interleukin 11 receptor, alpha  | PanCancer Immune Profiling |
| IL12A   | interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35) | PanCancer Immune Profiling |
| IL12B   | interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40) | PanCancer Immune Profiling |
| IL12RB1 | interleukin 12 receptor, beta 1   | PanCancer Immune Profiling |
| IL12RB2 | interleukin 12 receptor, beta 2   | PanCancer Immune Profiling |
| IL13    | interleukin 13  | PanCancer Immune Profiling |
| IL13RA1 | interleukin 13 receptor, alpha 1  | PanCancer Immune Profiling |
| IL13RA2 | interleukin 13 receptor, alpha 2  | PanCancer Immune Profiling |
| IL15    | interleukin 15  | PanCancer Immune Profiling |
| IL15RA  | interleukin 15 receptor, alpha  | PanCancer Immune Profiling |
| IL16    | interleukin 16  | PanCancer Immune Profiling |
| IL17A   | interleukin 17A   | PanCancer Immune Profiling |
| IL17B   | interleukin 17B   | PanCancer Immune Profiling |



|          |   |                                  |
|----------|---|----------------------------------|
| IL17F    | interleukin 17F                                   | PanCancer<br>Immune<br>Profiling |
| IL17RA   | interleukin 17 receptor A                         | PanCancer<br>Immune<br>Profiling |
| IL17RB   | interleukin 17 receptor B                         | PanCancer<br>Immune<br>Profiling |
| IL18     | interleukin 18 (interferon-gamma-inducing factor) | PanCancer<br>Immune<br>Profiling |
| IL18R1   | interleukin 18 receptor 1                         | PanCancer<br>Immune<br>Profiling |
| IL18RAP  | interleukin 18 receptor accessory protein         | PanCancer<br>Immune<br>Profiling |
| IL19     | interleukin 19                                    | PanCancer<br>Immune<br>Profiling |
| IL1A     | interleukin 1, alpha                              | PanCancer<br>Immune<br>Profiling |
| IL1B     | interleukin 1, beta                               | PanCancer<br>Immune<br>Profiling |
| IL1R1    | interleukin 1 receptor, type I                    | PanCancer<br>Immune<br>Profiling |
| IL1R2    | interleukin 1 receptor, type II                   | PanCancer<br>Immune<br>Profiling |
| IL1RAP   | interleukin 1 receptor accessory protein          | PanCancer<br>Immune<br>Profiling |
| IL1RAPL2 | interleukin 1 receptor accessory protein-like 2   | PanCancer<br>Immune<br>Profiling |
| IL1RL1   | interleukin 1 receptor-like 1                     | PanCancer<br>Immune<br>Profiling |
| IL1RL2   | interleukin 1 receptor-like 2                     | PanCancer<br>Immune<br>Profiling |

|         |                                   |                                  |
|---------|-----------------------------------|----------------------------------|
| IL1RN   | interleukin 1 receptor antagonist | PanCancer<br>Immune<br>Profiling |
| IL2     | interleukin 2                     | PanCancer<br>Immune<br>Profiling |
| IL21    | interleukin 21                    | PanCancer<br>Immune<br>Profiling |
| IL21R   | interleukin 21 receptor           | PanCancer<br>Immune<br>Profiling |
| IL22    | interleukin 22                    | PanCancer<br>Immune<br>Profiling |
| IL22RA1 | interleukin 22 receptor, alpha 1  | PanCancer<br>Immune<br>Profiling |
| IL22RA2 | interleukin 22 receptor, alpha 2  | PanCancer<br>Immune<br>Profiling |
| IL23A   | interleukin 23, alpha subunit p19 | PanCancer<br>Immune<br>Profiling |
| IL23R   | interleukin 23 receptor           | PanCancer<br>Immune<br>Profiling |
| IL24    | interleukin 24                    | PanCancer<br>Immune<br>Profiling |
| IL25    | interleukin 25                    | PanCancer<br>Immune<br>Profiling |
| IL26    | interleukin 26                    | PanCancer<br>Immune<br>Profiling |
| IL27    | interleukin 27                    | PanCancer<br>Immune<br>Profiling |
| IL2RA   | interleukin 2 receptor, alpha     | PanCancer<br>Immune<br>Profiling |
| IL2RB   | interleukin 2 receptor, beta      | PanCancer<br>Immune<br>Profiling |

|       |  |                                  |
|-------|--|----------------------------------|
| IL2RG | interleukin 2 receptor, gamma                                  | PanCancer<br>Immune<br>Profiling |
| IL3   | interleukin 3 (colony-stimulating factor, multiple)            | PanCancer<br>Immune<br>Profiling |
| IL32  | interleukin 32   | PanCancer<br>Immune<br>Profiling |
| IL34  | interleukin 34   | PanCancer<br>Immune<br>Profiling |
| IL3RA | interleukin 3 receptor, alpha (low affinity)                   | PanCancer<br>Immune<br>Profiling |
| IL4   | interleukin 4  | PanCancer<br>Immune<br>Profiling |
| IL4R  | interleukin 4 receptor   | PanCancer<br>Immune<br>Profiling |
| IL5   | interleukin 5 (colony-stimulating factor, eosinophil)          | PanCancer<br>Immune<br>Profiling |
| IL5RA | interleukin 5 receptor, alpha                                  | PanCancer<br>Immune<br>Profiling |
| IL6   | interleukin 6 (interferon, beta 2)                             | PanCancer<br>Immune<br>Profiling |
| IL6R  | interleukin 6 receptor   | PanCancer<br>Immune<br>Profiling |
| IL6ST | interleukin 6 signal transducer (gp130, oncostatin M receptor) | PanCancer<br>Immune<br>Profiling |
| IL7   | interleukin 7  | PanCancer<br>Immune<br>Profiling |
| IL7R  | interleukin 7 receptor   | PanCancer<br>Immune<br>Profiling |
| IL9   | interleukin 9  | PanCancer<br>Immune<br>Profiling |

|        |  |                                  |
|--------|--|----------------------------------|
| ILF3   | interleukin enhancer binding factor 3, 90kDa | PanCancer<br>Immune<br>Profiling |
| INPP5D | inositol polyphosphate-5-phosphatase, 145kDa | PanCancer<br>Immune<br>Profiling |
| IRAK1  | interleukin-1 receptor-associated kinase 1   | PanCancer<br>Immune<br>Profiling |
| IRAK2  | interleukin-1 receptor-associated kinase 2   | PanCancer<br>Immune<br>Profiling |
| IRAK4  | interleukin-1 receptor-associated kinase 4   | PanCancer<br>Immune<br>Profiling |
| IRF1   | interferon regulatory factor 1               | PanCancer<br>Immune<br>Profiling |
| IRF2   | interferon regulatory factor 2               | PanCancer<br>Immune<br>Profiling |
| IRF3   | interferon regulatory factor 3               | PanCancer<br>Immune<br>Profiling |
| IRF4   | interferon regulatory factor 4               | PanCancer<br>Immune<br>Profiling |
| IRF5   | interferon regulatory factor 5               | PanCancer<br>Immune<br>Profiling |
| IRF7   | interferon regulatory factor 7               | PanCancer<br>Immune<br>Profiling |
| IRF8   | interferon regulatory factor 8               | PanCancer<br>Immune<br>Profiling |
| IRGM   | immunity-related GTPase family, M            | PanCancer<br>Immune<br>Profiling |
| ISG15  | ISG15 ubiquitin-like modifier                | PanCancer<br>Immune<br>Profiling |
| ISG20  | interferon stimulated exonuclease gene 20kDa | PanCancer<br>Immune<br>Profiling |

|        |   |                            |
|--------|---|----------------------------|
| ITCH   | itchy E3 ubiquitin protein ligase   | PanCancer Immune Profiling |
| ITGA1  | integrin, alpha 1   | PanCancer Immune Profiling |
| ITGA2  | integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)  | PanCancer Immune Profiling |
| ITGA2B | integrin, alpha 2b (platelet glycoprotein IIb of IIb/IIIa complex, antigen CD41)                      | PanCancer Immune Profiling |
| ITGA4  | integrin, alpha 4 (antigen CD49D, alpha 4 subunit of VLA-4 receptor)                                  | PanCancer Immune Profiling |
| ITGA5  | integrin, alpha 5 (fibronectin receptor, alpha polypeptide)   | PanCancer Immune Profiling |
| ITGA6  | integrin, alpha 6   | PanCancer Immune Profiling |
| ITGAE  | integrin, alpha E (antigen CD103, human mucosal lymphocyte antigen 1; alpha polypeptide)              | PanCancer Immune Profiling |
| ITGAL  | integrin, alpha L (antigen CD11A (p180), lymphocyte function-associated antigen 1; alpha polypeptide) | PanCancer Immune Profiling |
| ITGAM  | integrin, alpha M (complement component 3 receptor 3 subunit)   | PanCancer Immune Profiling |
| ITGAX  | integrin, alpha X (complement component 3 receptor 4 subunit)   | PanCancer Immune Profiling |
| ITGB1  | integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)          | PanCancer Immune Profiling |
| ITGB2  | integrin, beta 2 (complement component 3 receptor 3 and 4 subunit)                                    | PanCancer Immune Profiling |
| ITGB3  | integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)   | PanCancer Immune Profiling |
| ITGB4  | integrin, beta 4  | PanCancer Immune Profiling |

|         |  |                                  |
|---------|--|----------------------------------|
| ITK     | IL2-inducible T-cell kinase  | PanCancer<br>Immune<br>Profiling |
| JAK1    | Janus kinase 1   | PanCancer<br>Immune<br>Profiling |
| JAK2    | Janus kinase 2   | PanCancer<br>Immune<br>Profiling |
| JAK3    | Janus kinase 3   | PanCancer<br>Immune<br>Profiling |
| JAM3    | junctional adhesion molecule 3   | PanCancer<br>Immune<br>Profiling |
| KIR2DL1 | killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 1    | PanCancer<br>Immune<br>Profiling |
| KIR2DL3 | killer cell immunoglobulin-like receptor, two domains, long cytoplasmic tail, 3    | PanCancer<br>Immune<br>Profiling |
| KIR2DS1 | killer cell immunoglobulin-like receptor, two domains, short cytoplasmic tail, 1   | PanCancer<br>Immune<br>Profiling |
| KIR3DL1 | killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 1  | PanCancer<br>Immune<br>Profiling |
| KIR3DL2 | killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 2  | PanCancer<br>Immune<br>Profiling |
| KIR3DL3 | killer cell immunoglobulin-like receptor, three domains, long cytoplasmic tail, 3  | PanCancer<br>Immune<br>Profiling |
| KIR3DS1 | killer cell immunoglobulin-like receptor, three domains, short cytoplasmic tail, 1 | PanCancer<br>Immune<br>Profiling |
| KIT     | v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog                      | PanCancer<br>Immune<br>Profiling |
| KLRB1   | killer cell lectin-like receptor subfamily B, member 1                             | PanCancer<br>Immune<br>Profiling |
| KLRC1   | killer cell lectin-like receptor subfamily C, member 1                             | PanCancer<br>Immune<br>Profiling |

|        |  |                            |
|--------|--|----------------------------|
| KLRC2  | killer cell lectin-like receptor subfamily C, member 2 | PanCancer Immune Profiling |
| KLRD1  | killer cell lectin-like receptor subfamily D, member 1 | PanCancer Immune Profiling |
| KLRF1  | killer cell lectin-like receptor subfamily F, member 1 | PanCancer Immune Profiling |
| KLRG1  | killer cell lectin-like receptor subfamily G, member 1 | PanCancer Immune Profiling |
| KLRK1  | killer cell lectin-like receptor subfamily K, member 1 | PanCancer Immune Profiling |
| LAG3   | lymphocyte-activation gene 3                           | PanCancer Immune Profiling |
| LAIR2  | leukocyte-associated immunoglobulin-like receptor 2    | PanCancer Immune Profiling |
| LAMP1  | lysosomal-associated membrane protein 1                | PanCancer Immune Profiling |
| LAMP2  | lysosomal-associated membrane protein 2                | PanCancer Immune Profiling |
| LAMP3  | lysosomal-associated membrane protein 3                | PanCancer Immune Profiling |
| LBP    | lipopolysaccharide binding protein                     | PanCancer Immune Profiling |
| LCK    | lymphocyte-specific protein tyrosine kinase            | PanCancer Immune Profiling |
| LCN2   | lipocalin 2  | PanCancer Immune Profiling |
| LCP1   | lymphocyte cytosolic protein 1 (L-plastin)             | PanCancer Immune Profiling |
| LGALS3 | lectin, galactoside-binding, soluble, 3                | PanCancer Immune Profiling |

|        |  |                            |
|--------|--|----------------------------|
| LIF    | leukemia inhibitory factor   | PanCancer Immune Profiling |
| LILRA1 | leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 1           | PanCancer Immune Profiling |
| LILRA4 | leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 4           | PanCancer Immune Profiling |
| LILRA5 | leukocyte immunoglobulin-like receptor, subfamily A (with TM domain), member 5           | PanCancer Immune Profiling |
| LILRB1 | leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 1 | PanCancer Immune Profiling |
| LILRB2 | leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 2 | PanCancer Immune Profiling |
| LILRB3 | leukocyte immunoglobulin-like receptor, subfamily B (with TM and ITIM domains), member 3 | PanCancer Immune Profiling |
| LRP1   | low density lipoprotein receptor-related protein 1                                       | PanCancer Immune Profiling |
| LRRN3  | leucine rich repeat neuronal 3   | PanCancer Immune Profiling |
| LTA    | lymphotoxin alpha (TNF superfamily, member 1)  | PanCancer Immune Profiling |
| LTB    | lymphotoxin beta (TNF superfamily, member 3)   | PanCancer Immune Profiling |
| LTBR   | lymphotoxin beta receptor (TNFR superfamily, member 3)                                   | PanCancer Immune Profiling |
| LTF    | lactotransferrin   | PanCancer Immune Profiling |
| LTK    | leukocyte receptor tyrosine kinase   | PanCancer Immune Profiling |
| LY86   | lymphocyte antigen 86  | PanCancer Immune Profiling |



|         |   |                            |
|---------|---|----------------------------|
| LY9     | lymphocyte antigen 9  | PanCancer Immune Profiling |
| LY96    | lymphocyte antigen 96   | PanCancer Immune Profiling |
| LYN     | v-yes-1 Yamaguchi sarcoma viral related oncogene homolog                      | PanCancer Immune Profiling |
| MAF     | v-maf musculoaponeurotic fibrosarcoma oncogene homolog (avian)                | PanCancer Immune Profiling |
| MAGEA1  | melanoma antigen family A, 1 (directs expression of antigen MZ2-E)            | PanCancer Immune Profiling |
| MAGEA12 | melanoma antigen family A, 12   | PanCancer Immune Profiling |
| MAGEA3  | melanoma antigen family A, 3  | PanCancer Immune Profiling |
| MAGEA4  | melanoma antigen family A, 4  | PanCancer Immune Profiling |
| MAGEB2  | melanoma antigen family B, 2  | PanCancer Immune Profiling |
| MAGEC1  | melanoma antigen family C, 1  | PanCancer Immune Profiling |
| MAGEC2  | melanoma antigen family C, 2  | PanCancer Immune Profiling |
| MAP2K1  | mitogen-activated protein kinase kinase 1                                     | PanCancer Immune Profiling |
| MAP2K2  | mitogen-activated protein kinase kinase 2                                     | PanCancer Immune Profiling |
| MAP2K4  | mitogen-activated protein kinase kinase 4                                     | PanCancer Immune Profiling |
| MAP3K1  | mitogen-activated protein kinase kinase kinase 1, E3 ubiquitin protein ligase | PanCancer Immune Profiling |

|              |   |                                  |
|--------------|---|----------------------------------|
| MAP3K5       | mitogen-activated protein kinase kinase kinase 5  | PanCancer<br>Immune<br>Profiling |
| MAP3K7       | mitogen-activated protein kinase kinase kinase 7  | PanCancer<br>Immune<br>Profiling |
| MAP4K2       | mitogen-activated protein kinase kinase kinase kinase 2                                     | PanCancer<br>Immune<br>Profiling |
| MAPK1        | mitogen-activated protein kinase 1  | PanCancer<br>Immune<br>Profiling |
| MAPK11       | mitogen-activated protein kinase 11   | PanCancer<br>Immune<br>Profiling |
| MAPK14       | mitogen-activated protein kinase 14   | PanCancer<br>Immune<br>Profiling |
| MAPK3        | mitogen-activated protein kinase 3  | PanCancer<br>Immune<br>Profiling |
| MAPK8        | mitogen-activated protein kinase 8  | PanCancer<br>Immune<br>Profiling |
| MAPKAPK<br>2 | mitogen-activated protein kinase-activated protein kinase 2                                 | PanCancer<br>Immune<br>Profiling |
| MARCO        | macrophage receptor with collagenous structure  | PanCancer<br>Immune<br>Profiling |
| MASP1        | mannan-binding lectin serine peptidase 1 (C4/C2 activating component of Ra-reactive factor) | PanCancer<br>Immune<br>Profiling |
| MASP2        | mannan-binding lectin serine peptidase 2  | PanCancer<br>Immune<br>Profiling |
| MAVS         | mitochondrial antiviral signaling protein   | PanCancer<br>Immune<br>Profiling |
| MBL2         | mannose-binding lectin (protein C) 2, soluble   | PanCancer<br>Immune<br>Profiling |
| MCAM         | melanoma cell adhesion molecule   | PanCancer<br>Immune<br>Profiling |

|        |  |                                  |
|--------|--|----------------------------------|
| MEF2C  | myocyte enhancer factor 2C   | PanCancer<br>Immune<br>Profiling |
| MEFV   | Mediterranean fever  | PanCancer<br>Immune<br>Profiling |
| MERTK  | c-mer proto-oncogene tyrosine kinase                                     | PanCancer<br>Immune<br>Profiling |
| MFGE8  | milk fat globule-EGF factor 8 protein                                    | PanCancer<br>Immune<br>Profiling |
| MICA   | MHC class I polypeptide-related sequence A                               | PanCancer<br>Immune<br>Profiling |
| MICB   | MHC class I polypeptide-related sequence B                               | PanCancer<br>Immune<br>Profiling |
| MIF    | macrophage migration inhibitory factor (glycosylation-inhibiting factor) | PanCancer<br>Immune<br>Profiling |
| MME    | membrane metallo-endopeptidase   | PanCancer<br>Immune<br>Profiling |
| MNX1   | motor neuron and pancreas homeobox 1                                     | PanCancer<br>Immune<br>Profiling |
| MPPED1 | metallophosphoesterase domain containing 1                               | PanCancer<br>Immune<br>Profiling |
| MR1    | major histocompatibility complex, class I-related                        | PanCancer<br>Immune<br>Profiling |
| MRC1   | mannose receptor, C type 1   | PanCancer<br>Immune<br>Profiling |
| MS4A1  | membrane-spanning 4-domains, subfamily A, member 1                       | PanCancer<br>Immune<br>Profiling |
| MS4A2  | membrane-spanning 4-domains, subfamily A, member 2                       | PanCancer<br>Immune<br>Profiling |
| MSR1   | macrophage scavenger receptor 1  | PanCancer<br>Immune<br>Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| MST1R  | macrophage stimulating 1 receptor (c-met-related tyrosine kinase)                   | PanCancer<br>Immune<br>Profiling |
| MUC1   | mucin 1, cell surface associated  | PanCancer<br>Immune<br>Profiling |
| MX1    | myxovirus (influenza virus) resistance 1, interferon-inducible protein p78 (mouse)  | PanCancer<br>Immune<br>Profiling |
| MYD88  | myeloid differentiation primary response gene (88)                                  | PanCancer<br>Immune<br>Profiling |
| NCAM1  | neural cell adhesion molecule 1   | PanCancer<br>Immune<br>Profiling |
| NCF4   | neutrophil cytosolic factor 4, 40kDa  | PanCancer<br>Immune<br>Profiling |
| NCR1   | natural cytotoxicity triggering receptor 1  | PanCancer<br>Immune<br>Profiling |
| NEFL   | neurofilament, light polypeptide  | PanCancer<br>Immune<br>Profiling |
| NFATC1 | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1           | PanCancer<br>Immune<br>Profiling |
| NFATC2 | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 2           | PanCancer<br>Immune<br>Profiling |
| NFATC3 | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 3           | PanCancer<br>Immune<br>Profiling |
| NFATC4 | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 4           | PanCancer<br>Immune<br>Profiling |
| NFKB1  | nuclear factor of kappa light polypeptide gene enhancer in B-cells 1                | PanCancer<br>Immune<br>Profiling |
| NFKB2  | nuclear factor of kappa light polypeptide gene enhancer in B-cells 2 (p49/p100)     | PanCancer<br>Immune<br>Profiling |
| NFKBIA | nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha | PanCancer<br>Immune<br>Profiling |

|        |  |                            |
|--------|--|----------------------------|
| NLRC5  | NLR family, CARD domain containing 5                   | PanCancer Immune Profiling |
| NLRP3  | NLR family, pyrin domain containing 3                  | PanCancer Immune Profiling |
| NOD1   | nucleotide-binding oligomerization domain containing 1 | PanCancer Immune Profiling |
| NOD2   | nucleotide-binding oligomerization domain containing 2 | PanCancer Immune Profiling |
| NOS2A  | nitric oxide synthase 2                                | PanCancer Immune Profiling |
| NOTCH1 | notch 1  | PanCancer Immune Profiling |
| NRP1   | neuropilin 1   | PanCancer Immune Profiling |
| NT5E   | 5'-nucleotidase, ecto (CD73)                           | PanCancer Immune Profiling |
| NUP107 | nucleoporin 107kDa                                     | PanCancer Immune Profiling |
| OAS3   | 2'-5'-oligoadenylate synthetase 3, 100kDa              | PanCancer Immune Profiling |
| OSM    | oncostatin M   | PanCancer Immune Profiling |
| PASD1  | PAS domain containing 1                                | PanCancer Immune Profiling |
| PAX5   | paired box 5   | PanCancer Immune Profiling |
| PBK    | PDZ binding kinase                                     | PanCancer Immune Profiling |
| PDCD1  | programmed cell death 1                                | PanCancer Immune Profiling |

|          |   |                                  |
|----------|---|----------------------------------|
| PDCD1LG2 | programmed cell death 1 ligand 2  | PanCancer<br>Immune<br>Profiling |
| PDGFC    | platelet derived growth factor C  | PanCancer<br>Immune<br>Profiling |
| PDGFRB   | platelet-derived growth factor receptor, beta polypeptide               | PanCancer<br>Immune<br>Profiling |
| PECAM1   | platelet/endothelial cell adhesion molecule 1                           | PanCancer<br>Immune<br>Profiling |
| PIK3CD   | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit delta | PanCancer<br>Immune<br>Profiling |
| PIK3CG   | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma | PanCancer<br>Immune<br>Profiling |
| PIN1     | peptidylprolyl cis/trans isomerase, NIMA-interacting 1                  | PanCancer<br>Immune<br>Profiling |
| PLA2G1B  | phospholipase A2, group IB (pancreas)                                   | PanCancer<br>Immune<br>Profiling |
| PLA2G6   | phospholipase A2, group VI (cytosolic, calcium-independent)             | PanCancer<br>Immune<br>Profiling |
| PLAU     | plasminogen activator, urokinase  | PanCancer<br>Immune<br>Profiling |
| PLAUR    | plasminogen activator, urokinase receptor                               | PanCancer<br>Immune<br>Profiling |
| PMCH     | pro-melanin-concentrating hormone                                       | PanCancer<br>Immune<br>Profiling |
| PNMA1    | paraneoplastic Ma antigen 1   | PanCancer<br>Immune<br>Profiling |
| POU2AF1  | POU class 2 associating factor 1  | PanCancer<br>Immune<br>Profiling |
| POU2F2   | POU class 2 homeobox 2  | PanCancer<br>Immune<br>Profiling |

|        |   |                            |
|--------|---|----------------------------|
| PPARG  | peroxisome proliferator-activated receptor gamma  | PanCancer Immune Profiling |
| PPBP   | pro-platelet basic protein (chemokine (C-X-C motif) ligand 7)                                       | PanCancer Immune Profiling |
| PRAME  | preferentially expressed antigen in melanoma  | PanCancer Immune Profiling |
| PRF1   | perforin 1 (pore forming protein)   | PanCancer Immune Profiling |
| PRG2   | proteoglycan 2, bone marrow (natural killer cell activator, eosinophil granule major basic protein) | PanCancer Immune Profiling |
| PRKCD  | protein kinase C, delta   | PanCancer Immune Profiling |
| PRKCE  | protein kinase C, epsilon   | PanCancer Immune Profiling |
| PRM1   | protamine 1   | PanCancer Immune Profiling |
| PSEN1  | presenilin 1  | PanCancer Immune Profiling |
| PSEN2  | presenilin 2 (Alzheimer disease 4)  | PanCancer Immune Profiling |
| PSMB10 | proteasome (prosome, macropain) subunit, beta type, 10  | PanCancer Immune Profiling |
| PSMB7  | proteasome (prosome, macropain) subunit, beta type, 7   | PanCancer Immune Profiling |
| PSMB8  | proteasome (prosome, macropain) subunit, beta type, 8 (large multifunctional peptidase 7)           | PanCancer Immune Profiling |
| PSMB9  | proteasome (prosome, macropain) subunit, beta type, 9 (large multifunctional peptidase 2)           | PanCancer Immune Profiling |
| PSMD7  | proteasome (prosome, macropain) 26S subunit, non-ATPase, 7  | PanCancer Immune Profiling |

|        |   |                            |
|--------|---|----------------------------|
| PTGDR2 | prostaglandin D2 receptor 2   | PanCancer Immune Profiling |
| PTGS2  | prostaglandin-endoperoxide synthase 2 (prostaglandin G/H synthase and cyclooxygenase) | PanCancer Immune Profiling |
| PTPRC  | protein tyrosine phosphatase, receptor type, C  | PanCancer Immune Profiling |
| PVR    | poliovirus receptor   | PanCancer Immune Profiling |
| PYCARD | PYD and CARD domain containing  | PanCancer Immune Profiling |
| RAG1   | recombination activating gene 1   | PanCancer Immune Profiling |
| REL    | v-rel reticuloendotheliosis viral oncogene homolog (avian)                            | PanCancer Immune Profiling |
| RELA   | v-rel reticuloendotheliosis viral oncogene homolog A (avian)                          | PanCancer Immune Profiling |
| RELB   | v-rel reticuloendotheliosis viral oncogene homolog B                                  | PanCancer Immune Profiling |
| REPS1  | RALBP1 associated Eps domain containing 1   | PanCancer Immune Profiling |
| RIPK2  | receptor-interacting serine-threonine kinase 2  | PanCancer Immune Profiling |
| ROPN1  | rhopilin associated tail protein 1  | PanCancer Immune Profiling |
| RORA   | RAR-related orphan receptor A   | PanCancer Immune Profiling |
| RORC   | RAR-related orphan receptor C   | PanCancer Immune Profiling |
| RPS6   | ribosomal protein S6  | PanCancer Immune Profiling |



|          |  |                                  |
|----------|--|----------------------------------|
| RRAD     | Ras-related associated with diabetes                         | PanCancer<br>Immune<br>Profiling |
| RUNX1    | runt-related transcription factor 1                          | PanCancer<br>Immune<br>Profiling |
| RUNX3    | runt-related transcription factor 3                          | PanCancer<br>Immune<br>Profiling |
| S100A12  | S100 calcium binding protein A12                             | PanCancer<br>Immune<br>Profiling |
| S100A7   | S100 calcium binding protein A7                              | PanCancer<br>Immune<br>Profiling |
| S100A8   | S100 calcium binding protein A8                              | PanCancer<br>Immune<br>Profiling |
| S100B    | S100 calcium binding protein B                               | PanCancer<br>Immune<br>Profiling |
| SAA1     | serum amyloid A1   | PanCancer<br>Immune<br>Profiling |
| SBNO2    | strawberry notch homolog 2 (Drosophila)                      | PanCancer<br>Immune<br>Profiling |
| SELE     | selectin E   | PanCancer<br>Immune<br>Profiling |
| SELL     | selectin L   | PanCancer<br>Immune<br>Profiling |
| SELPLG   | selectin P ligand  | PanCancer<br>Immune<br>Profiling |
| SEMG1    | semenogelin I  | PanCancer<br>Immune<br>Profiling |
| SERPINB2 | serpin peptidase inhibitor, clade B (ovalbumin), member 2    | PanCancer<br>Immune<br>Profiling |
| SERPING1 | serpin peptidase inhibitor, clade G (C1 inhibitor), member 1 | PanCancer<br>Immune<br>Profiling |

|         |   |                            |
|---------|---|----------------------------|
| SH2B2   | SH2B adaptor protein 2  | PanCancer Immune Profiling |
| SH2D1A  | SH2 domain containing 1A  | PanCancer Immune Profiling |
| SH2D1B  | SH2 domain containing 1B  | PanCancer Immune Profiling |
| SIGIRR  | single immunoglobulin and toll-interleukin 1 receptor (TIR) domain                  | PanCancer Immune Profiling |
| SIGLEC1 | sialic acid binding Ig-like lectin 1, sialoadhesin                                  | PanCancer Immune Profiling |
| SLAMF1  | signaling lymphocytic activation molecule family member 1                           | PanCancer Immune Profiling |
| SLAMF6  | SLAM family member 6  | PanCancer Immune Profiling |
| SLAMF7  | SLAM family member 7  | PanCancer Immune Profiling |
| SLC11A1 | solute carrier family 11 (proton-coupled divalent metal ion transporters), member 1 | PanCancer Immune Profiling |
| SMAD2   | SMAD family member 2  | PanCancer Immune Profiling |
| SMAD3   | SMAD family member 3  | PanCancer Immune Profiling |
| SMPD3   | sphingomyelin phosphodiesterase 3, neutral membrane (neutral sphingomyelinase II)   | PanCancer Immune Profiling |
| SOCS1   | suppressor of cytokine signaling 1  | PanCancer Immune Profiling |
| SPA17   | sperm autoantigenic protein 17  | PanCancer Immune Profiling |
| SPACA3  | sperm acrosome associated 3   | PanCancer Immune Profiling |

|         |  |                            |
|---------|--|----------------------------|
| SPANXB1 | SPANX family, member B1  | PanCancer Immune Profiling |
| SPINK5  | serine peptidase inhibitor, Kazal type 5   | PanCancer Immune Profiling |
| SPN     | sialophorin  | PanCancer Immune Profiling |
| SPO11   | SPO11 meiotic protein covalently bound to DSB homolog ( <i>S. cerevisiae</i> )   | PanCancer Immune Profiling |
| SPP1    | secreted phosphoprotein 1  | PanCancer Immune Profiling |
| SSX1    | synovial sarcoma, X breakpoint 1   | PanCancer Immune Profiling |
| SSX4    | synovial sarcoma, X breakpoint 4   | PanCancer Immune Profiling |
| ST6GAL1 | ST6 beta-galactosamide alpha-2,6-sialyltransferase 1                             | PanCancer Immune Profiling |
| STAT1   | signal transducer and activator of transcription 1, 91kDa                        | PanCancer Immune Profiling |
| STAT2   | signal transducer and activator of transcription 2, 113kDa                       | PanCancer Immune Profiling |
| STAT3   | signal transducer and activator of transcription 3 (acute-phase response factor) | PanCancer Immune Profiling |
| STAT4   | signal transducer and activator of transcription 4                               | PanCancer Immune Profiling |
| STAT5B  | signal transducer and activator of transcription 5B                              | PanCancer Immune Profiling |
| STAT6   | signal transducer and activator of transcription 6, interleukin-4 induced        | PanCancer Immune Profiling |
| SYCP1   | synaptonemal complex protein 1   | PanCancer Immune Profiling |

|       |   |                            |
|-------|---|----------------------------|
| SYK   | spleen tyrosine kinase                                      | PanCancer Immune Profiling |
| SYT17 | synaptotagmin XVII  | PanCancer Immune Profiling |
| TAB1  | TGF-beta activated kinase 1/MAP3K7 binding protein 1        | PanCancer Immune Profiling |
| TAL1  | T-cell acute lymphocytic leukemia 1                         | PanCancer Immune Profiling |
| TANK  | TRAF family member-associated NFKB activator                | PanCancer Immune Profiling |
| TAP1  | transporter 1, ATP-binding cassette, sub-family B (MDR/TAP) | PanCancer Immune Profiling |
| TAP2  | transporter 2, ATP-binding cassette, sub-family B (MDR/TAP) | PanCancer Immune Profiling |
| TAPBP | TAP binding protein (tapasin)                               | PanCancer Immune Profiling |
| TARP  | TCR gamma alternate reading frame protein                   | PanCancer Immune Profiling |
| TBK1  | TANK-binding kinase 1                                       | PanCancer Immune Profiling |
| TBX21 | T-box 21  | PanCancer Immune Profiling |
| TCF7  | transcription factor 7 (T-cell specific, HMG-box)           | PanCancer Immune Profiling |
| TFE3  | transcription factor binding to IGHM enhancer 3             | PanCancer Immune Profiling |
| TFEB  | transcription factor EB                                     | PanCancer Immune Profiling |
| TFRC  | transferrin receptor (p90, CD71)                            | PanCancer Immune Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| TGFB1  | transforming growth factor, beta 1                                  | PanCancer<br>Immune<br>Profiling |
| TGFB2  | transforming growth factor, beta 2                                  | PanCancer<br>Immune<br>Profiling |
| THBD   | thrombomodulin  | PanCancer<br>Immune<br>Profiling |
| THBS1  | thrombospondin 1  | PanCancer<br>Immune<br>Profiling |
| THY1   | Thy-1 cell surface antigen  | PanCancer<br>Immune<br>Profiling |
| TICAM1 | toll-like receptor adaptor molecule 1                               | PanCancer<br>Immune<br>Profiling |
| TICAM2 | toll-like receptor adaptor molecule 2                               | PanCancer<br>Immune<br>Profiling |
| TIGIT  | T cell immunoreceptor with Ig and ITIM domains                      | PanCancer<br>Immune<br>Profiling |
| TIRAP  | toll-interleukin 1 receptor (TIR) domain containing adaptor protein | PanCancer<br>Immune<br>Profiling |
| TLR1   | toll-like receptor 1  | PanCancer<br>Immune<br>Profiling |
| TLR10  | toll-like receptor 10   | PanCancer<br>Immune<br>Profiling |
| TLR2   | toll-like receptor 2  | PanCancer<br>Immune<br>Profiling |
| TLR3   | toll-like receptor 3  | PanCancer<br>Immune<br>Profiling |
| TLR4   | toll-like receptor 4  | PanCancer<br>Immune<br>Profiling |
| TLR5   | toll-like receptor 5  | PanCancer<br>Immune<br>Profiling |

|            |   |                            |
|------------|---|----------------------------|
| TLR6       | toll-like receptor 6  | PanCancer Immune Profiling |
| TLR7       | toll-like receptor 7  | PanCancer Immune Profiling |
| TLR8       | toll-like receptor 8  | PanCancer Immune Profiling |
| TLR9       | toll-like receptor 9  | PanCancer Immune Profiling |
| TMEFF2     | transmembrane protein with EGF-like and two follistatin-like domains 2                        | PanCancer Immune Profiling |
| TNF        | tumor necrosis factor   | PanCancer Immune Profiling |
| TNFAIP3    | tumor necrosis factor, alpha-induced protein 3  | PanCancer Immune Profiling |
| TNFRSF10 B | tumor necrosis factor receptor superfamily, member 10b  | PanCancer Immune Profiling |
| TNFRSF10 C | tumor necrosis factor receptor superfamily, member 10c, decoy without an intracellular domain | PanCancer Immune Profiling |
| TNFRSF11 A | tumor necrosis factor receptor superfamily, member 11a, NFKB activator                        | PanCancer Immune Profiling |
| TNFRSF11 B | tumor necrosis factor receptor superfamily, member 11b  | PanCancer Immune Profiling |
| TNFRSF12 A | tumor necrosis factor receptor superfamily, member 12A  | PanCancer Immune Profiling |
| TNFRSF13 B | tumor necrosis factor receptor superfamily, member 13B  | PanCancer Immune Profiling |
| TNFRSF13 C | tumor necrosis factor receptor superfamily, member 13C  | PanCancer Immune Profiling |
| TNFRSF14   | tumor necrosis factor receptor superfamily, member 14   | PanCancer Immune Profiling |

|          |  |                            |
|----------|--|----------------------------|
| TNFRSF17 | tumor necrosis factor receptor superfamily, member 17  | PanCancer Immune Profiling |
| TNFRSF18 | tumor necrosis factor receptor superfamily, member 18  | PanCancer Immune Profiling |
| TNFRSF1A | tumor necrosis factor receptor superfamily, member 1A  | PanCancer Immune Profiling |
| TNFRSF1B | tumor necrosis factor receptor superfamily, member 1B  | PanCancer Immune Profiling |
| TNFRSF4  | tumor necrosis factor receptor superfamily, member 4   | PanCancer Immune Profiling |
| TNFRSF8  | tumor necrosis factor receptor superfamily, member 8   | PanCancer Immune Profiling |
| TNFRSF9  | tumor necrosis factor receptor superfamily, member 9   | PanCancer Immune Profiling |
| TNFSF10  | tumor necrosis factor (ligand) superfamily, member 10  | PanCancer Immune Profiling |
| TNFSF11  | tumor necrosis factor (ligand) superfamily, member 11  | PanCancer Immune Profiling |
| TNFSF12  | tumor necrosis factor (ligand) superfamily, member 12  | PanCancer Immune Profiling |
| TNFSF13  | tumor necrosis factor (ligand) superfamily, member 13  | PanCancer Immune Profiling |
| TNFSF13B | tumor necrosis factor (ligand) superfamily, member 13b | PanCancer Immune Profiling |
| TNFSF14  | tumor necrosis factor (ligand) superfamily, member 14  | PanCancer Immune Profiling |
| TNFSF15  | tumor necrosis factor (ligand) superfamily, member 15  | PanCancer Immune Profiling |
| TNFSF18  | tumor necrosis factor (ligand) superfamily, member 18  | PanCancer Immune Profiling |

|        |   |                                  |
|--------|---|----------------------------------|
| TNFSF4 | tumor necrosis factor (ligand) superfamily, member 4          | PanCancer<br>Immune<br>Profiling |
| TNFSF8 | tumor necrosis factor (ligand) superfamily, member 8          | PanCancer<br>Immune<br>Profiling |
| TOLLIP | toll interacting protein                                      | PanCancer<br>Immune<br>Profiling |
| TP53   | tumor protein p53   | PanCancer<br>Immune<br>Profiling |
| TPSAB1 | tryptase alpha/beta 1   | PanCancer<br>Immune<br>Profiling |
| TPTE   | transmembrane phosphatase with tensin homology                | PanCancer<br>Immune<br>Profiling |
| TRAF2  | TNF receptor-associated factor 2                              | PanCancer<br>Immune<br>Profiling |
| TRAF3  | TNF receptor-associated factor 3                              | PanCancer<br>Immune<br>Profiling |
| TRAF6  | TNF receptor-associated factor 6, E3 ubiquitin protein ligase | PanCancer<br>Immune<br>Profiling |
| TREM1  | triggering receptor expressed on myeloid cells 1              | PanCancer<br>Immune<br>Profiling |
| TREM2  | triggering receptor expressed on myeloid cells 2              | PanCancer<br>Immune<br>Profiling |
| TTK    | TTK protein kinase  | PanCancer<br>Immune<br>Profiling |
| TXK    | TXK tyrosine kinase   | PanCancer<br>Immune<br>Profiling |
| TXNIP  | thioredoxin interacting protein                               | PanCancer<br>Immune<br>Profiling |
| TYK2   | tyrosine kinase 2   | PanCancer<br>Immune<br>Profiling |



|              |  |                                  |
|--------------|--|----------------------------------|
| UBC          | ubiquitin C  | PanCancer<br>Immune<br>Profiling |
| ULBP2        | UL16 binding protein 2                               | PanCancer<br>Immune<br>Profiling |
| USP9Y        | ubiquitin specific peptidase 9, Y-linked             | PanCancer<br>Immune<br>Profiling |
| VCAM1        | vascular cell adhesion molecule 1                    | PanCancer<br>Immune<br>Profiling |
| VEGFA        | vascular endothelial growth factor A                 | PanCancer<br>Immune<br>Profiling |
| VEGFC        | vascular endothelial growth factor C                 | PanCancer<br>Immune<br>Profiling |
| XCL2         | chemokine (C motif) ligand 2                         | PanCancer<br>Immune<br>Profiling |
| XCR1         | chemokine (C motif) receptor 1                       | PanCancer<br>Immune<br>Profiling |
| YTHDF2       | YTH domain family, member 2                          | PanCancer<br>Immune<br>Profiling |
| ZAP70        | zeta-chain (TCR) associated protein kinase 70kDa     | PanCancer<br>Immune<br>Profiling |
| ZNF205       | zinc finger protein 205                              | PanCancer<br>Immune<br>Profiling |
| ABCF1        | ATP-binding cassette, sub-family F (GCN20), member 1 | PanCancer<br>Immune<br>Profiling |
| AGK          | acylglycerol kinase                                  | PanCancer<br>Immune<br>Profiling |
| ALAS1        | aminolevulinate, delta-, synthase 1                  | PanCancer<br>Immune<br>Profiling |
| AMMECR1<br>L | AMME chromosomal region gene 1-like                  | PanCancer<br>Immune<br>Profiling |

|         |   |                            |
|---------|---|----------------------------|
| CC2D1B  | coiled-coil and C2 domain containing 1B   | PanCancer Immune Profiling |
| CNOT10  | CCR4-NOT transcription complex, subunit 10  | PanCancer Immune Profiling |
| CNOT4   | CCR4-NOT transcription complex, subunit 4   | PanCancer Immune Profiling |
| COG7    | component of oligomeric golgi complex 7   | PanCancer Immune Profiling |
| DDX50   | DEAD (Asp-Glu-Ala-Asp) box polypeptide 50   | PanCancer Immune Profiling |
| DHX16   | DEAH (Asp-Glu-Ala-His) box polypeptide 16   | PanCancer Immune Profiling |
| DNAJC14 | DnaJ (Hsp40) homolog, subfamily C, member 14  | PanCancer Immune Profiling |
| EDC3    | enhancer of mRNA decapping 3 homolog ( <i>S. cerevisiae</i> )                         | PanCancer Immune Profiling |
| EIF2B4  | eukaryotic translation initiation factor 2B, subunit 4 delta, 67kDa                   | PanCancer Immune Profiling |
| ERCC3   | excision repair cross-complementing rodent repair deficiency, complementation group 3 | PanCancer Immune Profiling |
| FCF1    | FCF1 small subunit (SSU) processome component homolog ( <i>S. cerevisiae</i> )        | PanCancer Immune Profiling |
| G6PD    | glucose-6-phosphate dehydrogenase   | PanCancer Immune Profiling |
| GPATCH3 | G patch domain containing 3   | PanCancer Immune Profiling |
| GUSB    | glucuronidase, beta   | PanCancer Immune Profiling |
| HDAC3   | histone deacetylase 3   | PanCancer Immune Profiling |

|         |   |                                  |
|---------|---|----------------------------------|
| HPRT1   | hypoxanthine phosphoribosyltransferase 1                        | PanCancer<br>Immune<br>Profiling |
| MRPS5   | mitochondrial ribosomal protein S5                              | PanCancer<br>Immune<br>Profiling |
| MTMR14  | myotubularin related protein 14                                 | PanCancer<br>Immune<br>Profiling |
| NOL7    | nucleolar protein 7, 27kDa                                      | PanCancer<br>Immune<br>Profiling |
| NUBP1   | nucleotide binding protein 1                                    | PanCancer<br>Immune<br>Profiling |
| POLR2A  | polymerase (RNA) II (DNA directed) polypeptide A, 220kDa        | PanCancer<br>Immune<br>Profiling |
| PPIA    | peptidylprolyl isomerase A (cyclophilin A)                      | PanCancer<br>Immune<br>Profiling |
| PRPF38A | PRP38 pre-mRNA processing factor 38 (yeast) domain containing A | PanCancer<br>Immune<br>Profiling |
| SAP130  | Sin3A-associated protein, 130kDa                                | PanCancer<br>Immune<br>Profiling |
| SDHA    | succinate dehydrogenase complex, subunit A, flavoprotein (Fp)   | PanCancer<br>Immune<br>Profiling |
| SF3A3   | splicing factor 3a, subunit 3, 60kDa                            | PanCancer<br>Immune<br>Profiling |
| TBP     | TATA box binding protein  | PanCancer<br>Immune<br>Profiling |
| TLK2    | tousled-like kinase 2   | PanCancer<br>Immune<br>Profiling |
| TMUB2   | transmembrane and ubiquitin-like domain containing 2            | PanCancer<br>Immune<br>Profiling |
| TRIM39  | tripartite motif containing 39                                  | PanCancer<br>Immune<br>Profiling |

|         |  |                            |
|---------|--|----------------------------|
| TUBB    | tubulin, beta class I                          | PanCancer Immune Profiling |
| USP39   | ubiquitin specific peptidase 39                | PanCancer Immune Profiling |
| ZC3H14  | zinc finger CCCH-type containing 14            | PanCancer Immune Profiling |
| ZKSCAN5 | zinc finger with KRAB and SCAN domains 5       | PanCancer Immune Profiling |
| ZNF143  | zinc finger protein 143                        | PanCancer Immune Profiling |
| ZNF346  | zinc finger protein 346                        | PanCancer Immune Profiling |
| ABL1    | c-abl oncogene 1, non-receptor tyrosine kinase | PanCancer Pathways         |
| ACVR1B  | activin A receptor, type IB                    | PanCancer Pathways         |
| ACVR1C  | activin A receptor, type IC                    | PanCancer Pathways         |
| ACVR2A  | activin A receptor, type IIA                   | PanCancer Pathways         |
| AKT1    | v-akt murine thymoma viral oncogene homolog 1  | PanCancer Pathways         |
| AKT2    | v-akt murine thymoma viral oncogene homolog 2  | PanCancer Pathways         |
| AKT3    | v-akt murine thymoma viral oncogene homolog 3  | PanCancer Pathways         |
| ALK     | anaplastic lymphoma receptor tyrosine kinase   | PanCancer Pathways         |
| ALKBH2  | alkB, alkylation repair homolog 2 (E. coli)    | PanCancer Pathways         |
| ALKBH3  | alkB, alkylation repair homolog 3 (E. coli)    | PanCancer Pathways         |
| AMER1   | APC membrane recruitment protein 1             | PanCancer Pathways         |
| AMH     | anti-Mullerian hormone                         | PanCancer Pathways         |
| ANGPT1  | angiopoietin 1                                 | PanCancer Pathways         |
| APC     | adenomatous polyposis coli                     | PanCancer Pathways         |

|        |   |                    |
|--------|---|--------------------|
| APH1B  | APH1B gamma secretase subunit                                     | PanCancer Pathways |
| AR     | androgen receptor   | PanCancer Pathways |
| ARID1A | AT rich interactive domain 1A (SWI-like)                          | PanCancer Pathways |
| ARID1B | AT rich interactive domain 1B (SWI1-like)                         | PanCancer Pathways |
| ARID2  | AT rich interactive domain 2 (ARID, RFX-like)                     | PanCancer Pathways |
| ARNT2  | aryl-hydrocarbon receptor nuclear translocator 2                  | PanCancer Pathways |
| ASXL1  | additional sex combs like 1 (Drosophila)                          | PanCancer Pathways |
| ATM    | ataxia telangiectasia mutated                                     | PanCancer Pathways |
| ATR    | ataxia telangiectasia and Rad3 related                            | PanCancer Pathways |
| ATRX   | alpha thalassemia/mental retardation syndrome X-linked            | PanCancer Pathways |
| AXIN1  | axin 1  | PanCancer Pathways |
| AXIN2  | axin 2  | PanCancer Pathways |
| B2M    | beta-2-microglobulin  | PanCancer Pathways |
| BAD    | BCL2-associated agonist of cell death                             | PanCancer Pathways |
| BAIAP3 | BAI1-associated protein 3   | PanCancer Pathways |
| BAMBI  | BMP and activin membrane-bound inhibitor                          | PanCancer Pathways |
| BAP1   | BRCA1 associated protein-1 (ubiquitin carboxy-terminal hydrolase) | PanCancer Pathways |
| BAX    | BCL2-associated X protein   | PanCancer Pathways |
| BCL2   | B-cell CLL/lymphoma 2   | PanCancer Pathways |
| BCL2A1 | BCL2-related protein A1   | PanCancer Pathways |
| BCL2L1 | BCL2-like 1   | PanCancer Pathways |
| BCOR   | BCL6 corepressor  | PanCancer Pathways |
| BDNF   | brain-derived neurotrophic factor                                 | PanCancer Pathways |

|          |  |                    |
|----------|--|--------------------|
| BID      | BH3 interacting domain death agonist                         | PanCancer Pathways |
| BIRC3    | baculoviral IAP repeat containing 3                          | PanCancer Pathways |
| BIRC7    | baculoviral IAP repeat containing 7                          | PanCancer Pathways |
| BMP2     | bone morphogenetic protein 2                                 | PanCancer Pathways |
| BMP4     | bone morphogenetic protein 4                                 | PanCancer Pathways |
| BMP5     | bone morphogenetic protein 5                                 | PanCancer Pathways |
| BMP6     | bone morphogenetic protein 6                                 | PanCancer Pathways |
| BMP7     | bone morphogenetic protein 7                                 | PanCancer Pathways |
| BMP8A    | bone morphogenetic protein 8a                                | PanCancer Pathways |
| BMPR1B   | bone morphogenetic protein receptor, type IB                 | PanCancer Pathways |
| BNIP3    | BCL2/adenovirus E1B 19kDa interacting protein 3              | PanCancer Pathways |
| BRAF     | v-raf murine sarcoma viral oncogene homolog B                | PanCancer Pathways |
| BRCA1    | breast cancer 1, early onset                                 | PanCancer Pathways |
| BRCA2    | breast cancer 2, early onset                                 | PanCancer Pathways |
| BRIP1    | BRCA1 interacting protein C-terminal helicase 1              | PanCancer Pathways |
| C19orf40 | chromosome 19 open reading frame 40                          | PanCancer Pathways |
| CACNA1C  | calcium channel, voltage-dependent, L type, alpha 1C subunit | PanCancer Pathways |
| CACNA1D  | calcium channel, voltage-dependent, L type, alpha 1D subunit | PanCancer Pathways |
| CACNA1E  | calcium channel, voltage-dependent, R type, alpha 1E subunit | PanCancer Pathways |
| CACNA1G  | calcium channel, voltage-dependent, T type, alpha 1G subunit | PanCancer Pathways |
| CACNA1H  | calcium channel, voltage-dependent, T type, alpha 1H subunit | PanCancer Pathways |
| CACNA2D1 | calcium channel, voltage-dependent, alpha 2/delta subunit 1  | PanCancer Pathways |
| CACNA2D2 | calcium channel, voltage-dependent, alpha 2/delta subunit 2  | PanCancer Pathways |

|          |   |                    |
|----------|---|--------------------|
| CACNA2D3 | calcium channel, voltage-dependent, alpha 2/delta subunit 3 | PanCancer Pathways |
| CACNA2D4 | calcium channel, voltage-dependent, alpha 2/delta subunit 4 | PanCancer Pathways |
| CACNB2   | calcium channel, voltage-dependent, beta 2 subunit          | PanCancer Pathways |
| CACNB3   | calcium channel, voltage-dependent, beta 3 subunit          | PanCancer Pathways |
| CACNB4   | calcium channel, voltage-dependent, beta 4 subunit          | PanCancer Pathways |
| CACNG1   | calcium channel, voltage-dependent, gamma subunit 1         | PanCancer Pathways |
| CACNG4   | calcium channel, voltage-dependent, gamma subunit 4         | PanCancer Pathways |
| CACNG6   | calcium channel, voltage-dependent, gamma subunit 6         | PanCancer Pathways |
| CALML3   | calmodulin-like 3   | PanCancer Pathways |
| CALML5   | calmodulin-like 5   | PanCancer Pathways |
| CALML6   | calmodulin-like 6   | PanCancer Pathways |
| CAMK2B   | calcium/calmodulin-dependent protein kinase II beta         | PanCancer Pathways |
| CAPN2    | calpain 2, (m/II) large subunit                             | PanCancer Pathways |
| CARD11   | caspase recruitment domain family, member 11                | PanCancer Pathways |
| CASP10   | caspase 10, apoptosis-related cysteine peptidase            | PanCancer Pathways |
| CASP12   | caspase 12 (gene/pseudogene)                                | PanCancer Pathways |
| CASP3    | caspase 3, apoptosis-related cysteine peptidase             | PanCancer Pathways |
| CASP7    | caspase 7, apoptosis-related cysteine peptidase             | PanCancer Pathways |
| CASP8    | caspase 8, apoptosis-related cysteine peptidase             | PanCancer Pathways |
| CASP9    | caspase 9, apoptosis-related cysteine peptidase             | PanCancer Pathways |
| CBL      | Cbl proto-oncogene, E3 ubiquitin protein ligase             | PanCancer Pathways |
| CBLC     | Cbl proto-oncogene C, E3 ubiquitin protein ligase           | PanCancer Pathways |
| CCNA1    | cyclin A1   | PanCancer Pathways |

|        |  |                    |
|--------|--|--------------------|
| CCNA2  | cyclin A2  | PanCancer Pathways |
| CCNB1  | cyclin B1  | PanCancer Pathways |
| CCNB3  | cyclin B3  | PanCancer Pathways |
| CCND1  | cyclin D1  | PanCancer Pathways |
| CCND2  | cyclin D2  | PanCancer Pathways |
| CCND3  | cyclin D3  | PanCancer Pathways |
| CCNE1  | cyclin E1  | PanCancer Pathways |
| CCNE2  | cyclin E2  | PanCancer Pathways |
| CCNO   | cyclin O   | PanCancer Pathways |
| CCR7   | chemokine (C-C motif) receptor 7                 | PanCancer Pathways |
| CD14   | CD14 molecule                                    | PanCancer Pathways |
| CD19   | CD19 molecule                                    | PanCancer Pathways |
| CD40   | CD40 molecule, TNF receptor superfamily member 5 | PanCancer Pathways |
| CDC14A | cell division cycle 14A                          | PanCancer Pathways |
| CDC14B | cell division cycle 14B                          | PanCancer Pathways |
| CDC25A | cell division cycle 25A                          | PanCancer Pathways |
| CDC25B | cell division cycle 25B                          | PanCancer Pathways |
| CDC25C | cell division cycle 25C                          | PanCancer Pathways |
| CDC6   | cell division cycle 6                            | PanCancer Pathways |
| CDC7   | cell division cycle 7                            | PanCancer Pathways |
| CDH1   | cadherin 1, type 1, E-cadherin (epithelial)      | PanCancer Pathways |
| CDK2   | cyclin-dependent kinase 2                        | PanCancer Pathways |
| CDK4   | cyclin-dependent kinase 4                        | PanCancer Pathways |



|         |   |                    |
|---------|---|--------------------|
| CDK6    | cyclin-dependent kinase 6                                 | PanCancer Pathways |
| CDKN1A  | cyclin-dependent kinase inhibitor 1A (p21, Cip1)          | PanCancer Pathways |
| CDKN1B  | cyclin-dependent kinase inhibitor 1B (p27, Kip1)          | PanCancer Pathways |
| CDKN1C  | cyclin-dependent kinase inhibitor 1C (p57, Kip2)          | PanCancer Pathways |
| CDKN2A  | cyclin-dependent kinase inhibitor 2A                      | PanCancer Pathways |
| CDKN2B  | cyclin-dependent kinase inhibitor 2B (p15, inhibits CDK4) | PanCancer Pathways |
| CDKN2C  | cyclin-dependent kinase inhibitor 2C (p18, inhibits CDK4) | PanCancer Pathways |
| CDKN2D  | cyclin-dependent kinase inhibitor 2D (p19, inhibits CDK4) | PanCancer Pathways |
| CEBPA   | CCAAT/enhancer binding protein (C/EBP), alpha             | PanCancer Pathways |
| CEBPE   | CCAAT/enhancer binding protein (C/EBP), epsilon           | PanCancer Pathways |
| CHAD    | chondroadherin  | PanCancer Pathways |
| CHEK1   | checkpoint kinase 1                                       | PanCancer Pathways |
| CHEK2   | checkpoint kinase 2                                       | PanCancer Pathways |
| CHUK    | conserved helix-loop-helix ubiquitous kinase              | PanCancer Pathways |
| CIC     | capicua transcriptional repressor                         | PanCancer Pathways |
| CLCF1   | cardiotrophin-like cytokine factor 1                      | PanCancer Pathways |
| CNTRF   | ciliary neurotrophic factor receptor                      | PanCancer Pathways |
| COL11A1 | collagen, type XI, alpha 1                                | PanCancer Pathways |
| COL11A2 | collagen, type XI, alpha 2                                | PanCancer Pathways |
| COL1A1  | collagen, type I, alpha 1                                 | PanCancer Pathways |
| COL1A2  | collagen, type I, alpha 2                                 | PanCancer Pathways |
| COL24A1 | collagen, type XXIV, alpha 1                              | PanCancer Pathways |
| COL27A1 | collagen, type XXVII, alpha 1                             | PanCancer Pathways |

|         |  |                    |
|---------|--|--------------------|
| COL2A1  | collagen, type II, alpha 1                           | PanCancer Pathways |
| COL3A1  | collagen, type III, alpha 1                          | PanCancer Pathways |
| COL4A3  | collagen, type IV, alpha 3 (Goodpasture antigen)     | PanCancer Pathways |
| COL4A4  | collagen, type IV, alpha 4                           | PanCancer Pathways |
| COL4A5  | collagen, type IV, alpha 5                           | PanCancer Pathways |
| COL4A6  | collagen, type IV, alpha 6                           | PanCancer Pathways |
| COL5A1  | collagen, type V, alpha 1                            | PanCancer Pathways |
| COL5A2  | collagen, type V, alpha 2                            | PanCancer Pathways |
| COL6A6  | collagen, type VI, alpha 6                           | PanCancer Pathways |
| COMP    | cartilage oligomeric matrix protein                  | PanCancer Pathways |
| CREB3L1 | cAMP responsive element binding protein 3-like 1     | PanCancer Pathways |
| CREB3L3 | cAMP responsive element binding protein 3-like 3     | PanCancer Pathways |
| CREB3L4 | cAMP responsive element binding protein 3-like 4     | PanCancer Pathways |
| CREB5   | cAMP responsive element binding protein 5            | PanCancer Pathways |
| CREBBP  | CREB binding protein                                 | PanCancer Pathways |
| CRLF2   | cytokine receptor-like factor 2                      | PanCancer Pathways |
| CSF1R   | colony stimulating factor 1 receptor                 | PanCancer Pathways |
| CSF2    | colony stimulating factor 2 (granulocyte-macrophage) | PanCancer Pathways |
| CSF3    | colony stimulating factor 3 (granulocyte)            | PanCancer Pathways |
| CSF3R   | colony stimulating factor 3 receptor (granulocyte)   | PanCancer Pathways |
| CTNNB1  | catenin (cadherin-associated protein), beta 1, 88kDa | PanCancer Pathways |
| CUL1    | cullin 1   | PanCancer Pathways |
| CXXC4   | CXXC finger protein 4                                | PanCancer Pathways |

|        |  |                    |
|--------|--|--------------------|
| CYLD   | cylindromatosis (turban tumor syndrome)      | PanCancer Pathways |
| DAXX   | death-domain associated protein              | PanCancer Pathways |
| DDB2   | damage-specific DNA binding protein 2, 48kDa | PanCancer Pathways |
| DDIT3  | DNA-damage-inducible transcript 3            | PanCancer Pathways |
| DDIT4  | DNA-damage-inducible transcript 4            | PanCancer Pathways |
| DKK1   | dickkopf WNT signaling pathway inhibitor 1   | PanCancer Pathways |
| DKK2   | dickkopf WNT signaling pathway inhibitor 2   | PanCancer Pathways |
| DKK4   | dickkopf WNT signaling pathway inhibitor 4   | PanCancer Pathways |
| DLL1   | delta-like 1 (Drosophila)                    | PanCancer Pathways |
| DLL3   | delta-like 3 (Drosophila)                    | PanCancer Pathways |
| DLL4   | delta-like 4 (Drosophila)                    | PanCancer Pathways |
| DNMT1  | DNA (cytosine-5-)-methyltransferase 1        | PanCancer Pathways |
| DNMT3A | DNA (cytosine-5-)-methyltransferase 3 alpha  | PanCancer Pathways |
| DTX1   | deltex 1, E3 ubiquitin ligase                | PanCancer Pathways |
| DTX3   | deltex 3, E3 ubiquitin ligase                | PanCancer Pathways |
| DTX4   | deltex 4, E3 ubiquitin ligase                | PanCancer Pathways |
| DUSP10 | dual specificity phosphatase 10              | PanCancer Pathways |
| DUSP2  | dual specificity phosphatase 2               | PanCancer Pathways |
| DUSP4  | dual specificity phosphatase 4               | PanCancer Pathways |
| DUSP5  | dual specificity phosphatase 5               | PanCancer Pathways |
| DUSP6  | dual specificity phosphatase 6               | PanCancer Pathways |
| DUSP8  | dual specificity phosphatase 8               | PanCancer Pathways |
| E2F1   | E2F transcription factor 1                   | PanCancer Pathways |

|          |   |                    |
|----------|---|--------------------|
| E2F5     | E2F transcription factor 5, p130-binding  | PanCancer Pathways |
| EFNA1    | ephrin-A1   | PanCancer Pathways |
| EFNA2    | ephrin-A2   | PanCancer Pathways |
| EFNA3    | ephrin-A3   | PanCancer Pathways |
| EFNA5    | ephrin-A5   | PanCancer Pathways |
| EGF      | epidermal growth factor   | PanCancer Pathways |
| EGFR     | epidermal growth factor receptor  | PanCancer Pathways |
| EIF4EBP1 | eukaryotic translation initiation factor 4E binding protein 1                         | PanCancer Pathways |
| ENDOG    | endonuclease G  | PanCancer Pathways |
| EP300    | E1A binding protein p300  | PanCancer Pathways |
| EPHA2    | EPH receptor A2   | PanCancer Pathways |
| EPO      | erythropoietin  | PanCancer Pathways |
| EPOR     | erythropoietin receptor   | PanCancer Pathways |
| ERBB2    | v-erb-b2 avian erythroblastic leukemia viral oncogene homolog 2                       | PanCancer Pathways |
| ERCC2    | excision repair cross-complementing rodent repair deficiency, complementation group 2 | PanCancer Pathways |
| ERCC6    | excision repair cross-complementing rodent repair deficiency, complementation group 6 | PanCancer Pathways |
| ETS2     | v-ets avian erythroblastosis virus E26 oncogene homolog 2                             | PanCancer Pathways |
| ETV1     | ets variant 1   | PanCancer Pathways |
| ETV4     | ets variant 4   | PanCancer Pathways |
| ETV7     | ets variant 7   | PanCancer Pathways |
| EYA1     | eyes absent homolog 1 (Drosophila)  | PanCancer Pathways |
| EZH2     | enhancer of zeste homolog 2 (Drosophila)  | PanCancer Pathways |
| FANCA    | Fanconi anemia, complementation group A   | PanCancer Pathways |

|       |  |                    |
|-------|--|--------------------|
| FANCB | Fanconi anemia, complementation group B                              | PanCancer Pathways |
| FANCC | Fanconi anemia, complementation group C                              | PanCancer Pathways |
| FANCE | Fanconi anemia, complementation group E                              | PanCancer Pathways |
| FANCF | Fanconi anemia, complementation group F                              | PanCancer Pathways |
| FANCG | Fanconi anemia, complementation group G                              | PanCancer Pathways |
| FANCL | Fanconi anemia, complementation group L                              | PanCancer Pathways |
| FAS   | Fas cell surface death receptor                                      | PanCancer Pathways |
| FASLG | Fas ligand (TNF superfamily, member 6)                               | PanCancer Pathways |
| FBXW7 | F-box and WD repeat domain containing 7, E3 ubiquitin protein ligase | PanCancer Pathways |
| FEN1  | flap structure-specific endonuclease 1                               | PanCancer Pathways |
| FGF1  | fibroblast growth factor 1 (acidic)                                  | PanCancer Pathways |
| FGF10 | fibroblast growth factor 10  | PanCancer Pathways |
| FGF11 | fibroblast growth factor 11  | PanCancer Pathways |
| FGF12 | fibroblast growth factor 12  | PanCancer Pathways |
| FGF13 | fibroblast growth factor 13  | PanCancer Pathways |
| FGF14 | fibroblast growth factor 14  | PanCancer Pathways |
| FGF16 | fibroblast growth factor 16  | PanCancer Pathways |
| FGF17 | fibroblast growth factor 17  | PanCancer Pathways |
| FGF18 | fibroblast growth factor 18  | PanCancer Pathways |
| FGF19 | fibroblast growth factor 19  | PanCancer Pathways |
| FGF2  | fibroblast growth factor 2 (basic)                                   | PanCancer Pathways |
| FGF20 | fibroblast growth factor 20  | PanCancer Pathways |
| FGF21 | fibroblast growth factor 21  | PanCancer Pathways |

|       |  |                    |
|-------|--|--------------------|
| FGF22 | fibroblast growth factor 22  | PanCancer Pathways |
| FGF23 | fibroblast growth factor 23  | PanCancer Pathways |
| FGF3  | fibroblast growth factor 3   | PanCancer Pathways |
| FGF4  | fibroblast growth factor 4   | PanCancer Pathways |
| FGF5  | fibroblast growth factor 5   | PanCancer Pathways |
| FGF6  | fibroblast growth factor 6   | PanCancer Pathways |
| FGF7  | fibroblast growth factor 7   | PanCancer Pathways |
| FGF8  | fibroblast growth factor 8 (androgen-induced)                      | PanCancer Pathways |
| FGF9  | fibroblast growth factor 9   | PanCancer Pathways |
| FGFR1 | fibroblast growth factor receptor 1                                | PanCancer Pathways |
| FGFR2 | fibroblast growth factor receptor 2                                | PanCancer Pathways |
| FGFR3 | fibroblast growth factor receptor 3                                | PanCancer Pathways |
| FGFR4 | fibroblast growth factor receptor 4                                | PanCancer Pathways |
| FIGF  | c-fos induced growth factor (vascular endothelial growth factor D) | PanCancer Pathways |
| FLNA  | filamin A, alpha   | PanCancer Pathways |
| FLNC  | filamin C, gamma   | PanCancer Pathways |
| FLT1  | fms-related tyrosine kinase 1                                      | PanCancer Pathways |
| FLT3  | fms-related tyrosine kinase 3                                      | PanCancer Pathways |
| FN1   | fibronectin 1  | PanCancer Pathways |
| FOS   | FBJ murine osteosarcoma viral oncogene homolog                     | PanCancer Pathways |
| FOSL1 | FOS-like antigen 1   | PanCancer Pathways |
| FOXL2 | forkhead box L2  | PanCancer Pathways |
| FOXO4 | forkhead box O4  | PanCancer Pathways |

|         |   |                    |
|---------|---|--------------------|
| FST     | follistatin   | PanCancer Pathways |
| FUBP1   | far upstream element (FUSE) binding protein 1                       | PanCancer Pathways |
| FUT8    | fucosyltransferase 8 (alpha (1,6) fucosyltransferase)               | PanCancer Pathways |
| FZD10   | frizzled family receptor 10   | PanCancer Pathways |
| FZD2    | frizzled family receptor 2  | PanCancer Pathways |
| FZD3    | frizzled family receptor 3  | PanCancer Pathways |
| FZD7    | frizzled family receptor 7  | PanCancer Pathways |
| FZD8    | frizzled family receptor 8  | PanCancer Pathways |
| FZD9    | frizzled family receptor 9  | PanCancer Pathways |
| GADD45A | growth arrest and DNA-damage-inducible, alpha                       | PanCancer Pathways |
| GADD45B | growth arrest and DNA-damage-inducible, beta                        | PanCancer Pathways |
| GADD45G | growth arrest and DNA-damage-inducible, gamma                       | PanCancer Pathways |
| GAS1    | growth arrest-specific 1  | PanCancer Pathways |
| GATA1   | GATA binding protein 1 (globin transcription factor 1)              | PanCancer Pathways |
| GATA2   | GATA binding protein 2  | PanCancer Pathways |
| GATA3   | GATA binding protein 3  | PanCancer Pathways |
| GDF6    | growth differentiation factor 6                                     | PanCancer Pathways |
| GHR     | growth hormone receptor   | PanCancer Pathways |
| GLI1    | GLI family zinc finger 1  | PanCancer Pathways |
| GLI3    | GLI family zinc finger 3  | PanCancer Pathways |
| GNA11   | guanine nucleotide binding protein (G protein), alpha 11 (Gq class) | PanCancer Pathways |
| GNAQ    | guanine nucleotide binding protein (G protein), q polypeptide       | PanCancer Pathways |
| GNAS    | GNAS complex locus  | PanCancer Pathways |

|        |  |                    |
|--------|--|--------------------|
| GNG12  | guanine nucleotide binding protein (G protein), gamma 12                                 | PanCancer Pathways |
| GNG4   | guanine nucleotide binding protein (G protein), gamma 4                                  | PanCancer Pathways |
| GNG7   | guanine nucleotide binding protein (G protein), gamma 7                                  | PanCancer Pathways |
| GNGT1  | guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 1 | PanCancer Pathways |
| GPC4   | glypican 4   | PanCancer Pathways |
| GRB2   | growth factor receptor-bound protein 2   | PanCancer Pathways |
| GRIA3  | glutamate receptor, ionotropic, AMPA 3   | PanCancer Pathways |
| GRIN1  | glutamate receptor, ionotropic, N-methyl D-aspartate 1                                   | PanCancer Pathways |
| GRIN2A | glutamate receptor, ionotropic, N-methyl D-aspartate 2A                                  | PanCancer Pathways |
| GRIN2B | glutamate receptor, ionotropic, N-methyl D-aspartate 2B                                  | PanCancer Pathways |
| GSK3B  | glycogen synthase kinase 3 beta  | PanCancer Pathways |
| GTF2H3 | general transcription factor IIH, polypeptide 3, 34kDa                                   | PanCancer Pathways |
| GZMB   | granzyme B (granzyme 2, cytotoxic T-lymphocyte-associated serine esterase 1)             | PanCancer Pathways |
| H2AFX  | H2A histone family, member X   | PanCancer Pathways |
| H3F3A  | H3 histone, family 3A  | PanCancer Pathways |
| H3F3C  | H3 histone, family 3C  | PanCancer Pathways |
| HDAC1  | histone deacetylase 1  | PanCancer Pathways |
| HDAC10 | histone deacetylase 10   | PanCancer Pathways |
| HDAC11 | histone deacetylase 11   | PanCancer Pathways |
| HDAC2  | histone deacetylase 2  | PanCancer Pathways |
| HDAC4  | histone deacetylase 4  | PanCancer Pathways |
| HDAC5  | histone deacetylase 5  | PanCancer Pathways |
| HDAC6  | histone deacetylase 6  | PanCancer Pathways |



|          |  |                    |
|----------|--|--------------------|
| HELLS    | helicase, lymphoid-specific                              | PanCancer Pathways |
| HES1     | hes family bHLH transcription factor 1                   | PanCancer Pathways |
| HES5     | hes family bHLH transcription factor 5                   | PanCancer Pathways |
| HGF      | hepatocyte growth factor (hepapoietin A; scatter factor) | PanCancer Pathways |
| HHEX     | hematopoietically expressed homeobox                     | PanCancer Pathways |
| HHIP     | hedgehog interacting protein                             | PanCancer Pathways |
| HIST1H3B | histone cluster 1, H3b                                   | PanCancer Pathways |
| HIST1H3G | histone cluster 1, H3g                                   | PanCancer Pathways |
| HIST1H3H | histone cluster 1, H3h                                   | PanCancer Pathways |
| HMGA1    | high mobility group AT-hook 1                            | PanCancer Pathways |
| HMGA2    | high mobility group AT-hook 2                            | PanCancer Pathways |
| HNF1A    | HNF1 homeobox A  | PanCancer Pathways |
| HOXA10   | homeobox A10   | PanCancer Pathways |
| HOXA11   | homeobox A11   | PanCancer Pathways |
| HOXA9    | homeobox A9  | PanCancer Pathways |
| HPGD     | hydroxyprostaglandin dehydrogenase 15-(NAD)              | PanCancer Pathways |
| HRAS     | Harvey rat sarcoma viral oncogene homolog                | PanCancer Pathways |
| HSP90B1  | heat shock protein 90kDa beta (Grp94), member 1          | PanCancer Pathways |
| HSPA1A   | heat shock 70kDa protein 1A                              | PanCancer Pathways |
| HSPA2    | heat shock 70kDa protein 2                               | PanCancer Pathways |
| HSPA6    | heat shock 70kDa protein 6 (HSP70B')                     | PanCancer Pathways |
| HSPB1    | heat shock 27kDa protein 1                               | PanCancer Pathways |
| IBSP     | integrin-binding sialoprotein                            | PanCancer Pathways |

|         |   |                    |
|---------|---|--------------------|
| ID1     | inhibitor of DNA binding 1, dominant negative helix-loop-helix protein                                    | PanCancer Pathways |
| ID2     | inhibitor of DNA binding 2, dominant negative helix-loop-helix protein                                    | PanCancer Pathways |
| ID4     | inhibitor of DNA binding 4, dominant negative helix-loop-helix protein                                    | PanCancer Pathways |
| IDH1    | isocitrate dehydrogenase 1 (NADP+), soluble   | PanCancer Pathways |
| IDH2    | isocitrate dehydrogenase 2 (NADP+), mitochondrial   | PanCancer Pathways |
| IFNA17  | interferon, alpha 17  | PanCancer Pathways |
| IFNA2   | interferon, alpha 2   | PanCancer Pathways |
| IFNA7   | interferon, alpha 7   | PanCancer Pathways |
| IFNG    | interferon, gamma   | PanCancer Pathways |
| IGF1    | insulin-like growth factor 1 (somatomedin C)  | PanCancer Pathways |
| IGF1R   | insulin-like growth factor 1 receptor   | PanCancer Pathways |
| IGFBP3  | insulin-like growth factor binding protein 3  | PanCancer Pathways |
| IKBKB   | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase beta                                | PanCancer Pathways |
| IKBKG   | inhibitor of kappa light polypeptide gene enhancer in B-cells, kinase gamma                               | PanCancer Pathways |
| IL10    | interleukin 10  | PanCancer Pathways |
| IL11    | interleukin 11  | PanCancer Pathways |
| IL11RA  | interleukin 11 receptor, alpha  | PanCancer Pathways |
| IL12A   | interleukin 12A (natural killer cell stimulatory factor 1, cytotoxic lymphocyte maturation factor 1, p35) | PanCancer Pathways |
| IL12B   | interleukin 12B (natural killer cell stimulatory factor 2, cytotoxic lymphocyte maturation factor 2, p40) | PanCancer Pathways |
| IL12RB2 | interleukin 12 receptor, beta 2   | PanCancer Pathways |
| IL13    | interleukin 13  | PanCancer Pathways |
| IL13RA2 | interleukin 13 receptor, alpha 2  | PanCancer Pathways |
| IL15    | interleukin 15  | PanCancer Pathways |

|         |   |                    |
|---------|---|--------------------|
| IL19    | interleukin 19                                      | PanCancer Pathways |
| IL1A    | interleukin 1, alpha                                | PanCancer Pathways |
| IL1B    | interleukin 1, beta                                 | PanCancer Pathways |
| IL1R1   | interleukin 1 receptor, type I                      | PanCancer Pathways |
| IL1R2   | interleukin 1 receptor, type II                     | PanCancer Pathways |
| IL1RAP  | interleukin 1 receptor accessory protein            | PanCancer Pathways |
| IL20RA  | interleukin 20 receptor, alpha                      | PanCancer Pathways |
| IL20RB  | interleukin 20 receptor beta                        | PanCancer Pathways |
| IL22RA1 | interleukin 22 receptor, alpha 1                    | PanCancer Pathways |
| IL22RA2 | interleukin 22 receptor, alpha 2                    | PanCancer Pathways |
| IL23A   | interleukin 23, alpha subunit p19                   | PanCancer Pathways |
| IL23R   | interleukin 23 receptor                             | PanCancer Pathways |
| IL24    | interleukin 24                                      | PanCancer Pathways |
| IL2RA   | interleukin 2 receptor, alpha                       | PanCancer Pathways |
| IL2RB   | interleukin 2 receptor, beta                        | PanCancer Pathways |
| IL3     | interleukin 3 (colony-stimulating factor, multiple) | PanCancer Pathways |
| IL3RA   | interleukin 3 receptor, alpha (low affinity)        | PanCancer Pathways |
| IL5RA   | interleukin 5 receptor, alpha                       | PanCancer Pathways |
| IL6     | interleukin 6 (interferon, beta 2)                  | PanCancer Pathways |
| IL6R    | interleukin 6 receptor                              | PanCancer Pathways |
| IL7     | interleukin 7                                       | PanCancer Pathways |
| IL7R    | interleukin 7 receptor                              | PanCancer Pathways |
| IL8     | interleukin 8                                       | PanCancer Pathways |

|       |  |                    |
|-------|--|--------------------|
| INHBA | inhibin, beta A  | PanCancer Pathways |
| INHBB | inhibin, beta B  | PanCancer Pathways |
| IRAK2 | interleukin-1 receptor-associated kinase 2                           | PanCancer Pathways |
| IRAK3 | interleukin-1 receptor-associated kinase 3                           | PanCancer Pathways |
| IRS1  | insulin receptor substrate 1   | PanCancer Pathways |
| ITGA2 | integrin, alpha 2 (CD49B, alpha 2 subunit of VLA-2 receptor)         | PanCancer Pathways |
| ITGA3 | integrin, alpha 3 (antigen CD49C, alpha 3 subunit of VLA-3 receptor) | PanCancer Pathways |
| ITGA6 | integrin, alpha 6  | PanCancer Pathways |
| ITGA7 | integrin, alpha 7  | PanCancer Pathways |
| ITGA8 | integrin, alpha 8  | PanCancer Pathways |
| ITGA9 | integrin, alpha 9  | PanCancer Pathways |
| ITGB3 | integrin, beta 3 (platelet glycoprotein IIIa, antigen CD61)          | PanCancer Pathways |
| ITGB4 | integrin, beta 4   | PanCancer Pathways |
| ITGB6 | integrin, beta 6   | PanCancer Pathways |
| ITGB7 | integrin, beta 7   | PanCancer Pathways |
| ITGB8 | integrin, beta 8   | PanCancer Pathways |
| JAG1  | jagged 1   | PanCancer Pathways |
| JAG2  | jagged 2   | PanCancer Pathways |
| JAK1  | Janus kinase 1   | PanCancer Pathways |
| JAK2  | Janus kinase 2   | PanCancer Pathways |
| JAK3  | Janus kinase 3   | PanCancer Pathways |
| JUN   | jun proto-oncogene   | PanCancer Pathways |
| KAT2B | K(lysine) acetyltransferase 2B                                       | PanCancer Pathways |

|        |   |                    |
|--------|---|--------------------|
| KDM5C  | lysine (K)-specific demethylase 5C                            | PanCancer Pathways |
| KDM6A  | lysine (K)-specific demethylase 6A                            | PanCancer Pathways |
| KIT    | v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog | PanCancer Pathways |
| KITLG  | KIT ligand  | PanCancer Pathways |
| KLF4   | Kruppel-like factor 4 (gut)                                   | PanCancer Pathways |
| KMT2C  | lysine (K)-specific methyltransferase 2C                      | PanCancer Pathways |
| KMT2D  | lysine (K)-specific methyltransferase 2D                      | PanCancer Pathways |
| KRAS   | Kirsten rat sarcoma viral oncogene homolog                    | PanCancer Pathways |
| LAMA1  | laminin, alpha 1  | PanCancer Pathways |
| LAMA3  | laminin, alpha 3  | PanCancer Pathways |
| LAMA5  | laminin, alpha 5  | PanCancer Pathways |
| LAMB3  | laminin, beta 3   | PanCancer Pathways |
| LAMB4  | laminin, beta 4   | PanCancer Pathways |
| LAMC2  | laminin, gamma 2  | PanCancer Pathways |
| LAMC3  | laminin, gamma 3  | PanCancer Pathways |
| LAT    | linker for activation of T cells                              | PanCancer Pathways |
| LEF1   | lymphoid enhancer-binding factor 1                            | PanCancer Pathways |
| LEFTY1 | left-right determination factor 1                             | PanCancer Pathways |
| LEFTY2 | left-right determination factor 2                             | PanCancer Pathways |
| LEP    | leptin  | PanCancer Pathways |
| LEPR   | leptin receptor   | PanCancer Pathways |
| LFNG   | LFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase  | PanCancer Pathways |
| LIF    | leukemia inhibitory factor                                    | PanCancer Pathways |

|          |   |                    |
|----------|---|--------------------|
| LIFR     | leukemia inhibitory factor receptor alpha                                     | PanCancer Pathways |
| LIG4     | ligase IV, DNA, ATP-dependent   | PanCancer Pathways |
| LRP2     | low density lipoprotein receptor-related protein 2                            | PanCancer Pathways |
| LTBP1    | latent transforming growth factor beta binding protein 1                      | PanCancer Pathways |
| MAD2L2   | MAD2 mitotic arrest deficient-like 2 (yeast)                                  | PanCancer Pathways |
| MAML2    | mastermind-like 2 (Drosophila)  | PanCancer Pathways |
| MAP2K1   | mitogen-activated protein kinase kinase 1                                     | PanCancer Pathways |
| MAP2K2   | mitogen-activated protein kinase kinase 2                                     | PanCancer Pathways |
| MAP2K4   | mitogen-activated protein kinase kinase 4                                     | PanCancer Pathways |
| MAP2K6   | mitogen-activated protein kinase kinase 6                                     | PanCancer Pathways |
| MAP3K1   | mitogen-activated protein kinase kinase kinase 1, E3 ubiquitin protein ligase | PanCancer Pathways |
| MAP3K12  | mitogen-activated protein kinase kinase kinase 12                             | PanCancer Pathways |
| MAP3K13  | mitogen-activated protein kinase kinase kinase 13                             | PanCancer Pathways |
| MAP3K14  | mitogen-activated protein kinase kinase kinase 14                             | PanCancer Pathways |
| MAP3K5   | mitogen-activated protein kinase kinase kinase 5                              | PanCancer Pathways |
| MAP3K8   | mitogen-activated protein kinase kinase kinase 8                              | PanCancer Pathways |
| MAPK1    | mitogen-activated protein kinase 1  | PanCancer Pathways |
| MAPK10   | mitogen-activated protein kinase 10   | PanCancer Pathways |
| MAPK12   | mitogen-activated protein kinase 12   | PanCancer Pathways |
| MAPK3    | mitogen-activated protein kinase 3  | PanCancer Pathways |
| MAPK8    | mitogen-activated protein kinase 8  | PanCancer Pathways |
| MAPK8IP1 | mitogen-activated protein kinase 8 interacting protein 1                      | PanCancer Pathways |
| MAPK8IP2 | mitogen-activated protein kinase 8 interacting protein 2                      | PanCancer Pathways |

|       |  |                    |
|-------|--|--------------------|
| MAPK9 | mitogen-activated protein kinase 9   | PanCancer Pathways |
| MAPT  | microtubule-associated protein tau   | PanCancer Pathways |
| MCM2  | minichromosome maintenance complex component 2   | PanCancer Pathways |
| MCM4  | minichromosome maintenance complex component 4   | PanCancer Pathways |
| MCM5  | minichromosome maintenance complex component 5   | PanCancer Pathways |
| MCM7  | minichromosome maintenance complex component 7   | PanCancer Pathways |
| MDC1  | mediator of DNA-damage checkpoint 1  | PanCancer Pathways |
| MDM2  | MDM2 oncogene, E3 ubiquitin protein ligase   | PanCancer Pathways |
| MECOM | MDS1 and EVI1 complex locus  | PanCancer Pathways |
| MED12 | mediator complex subunit 12  | PanCancer Pathways |
| MEN1  | multiple endocrine neoplasia I   | PanCancer Pathways |
| MET   | met proto-oncogene   | PanCancer Pathways |
| MFNG  | MFNG O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase                                   | PanCancer Pathways |
| MGMT  | O-6-methylguanine-DNA methyltransferase  | PanCancer Pathways |
| MLF1  | myeloid leukemia factor 1  | PanCancer Pathways |
| MLH1  | mutL homolog 1   | PanCancer Pathways |
| MLLT3 | myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 3 | PanCancer Pathways |
| MLLT4 | myeloid/lymphoid or mixed-lineage leukemia (trithorax homolog, Drosophila); translocated to, 4 | PanCancer Pathways |
| MMP3  | matrix metalloproteinase 3 (stromelysin 1, progelatinase)                                      | PanCancer Pathways |
| MMP7  | matrix metalloproteinase 7 (matrilysin, uterine)   | PanCancer Pathways |
| MMP9  | matrix metalloproteinase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)         | PanCancer Pathways |
| MNAT1 | MNAT CDK-activating kinase assembly factor 1   | PanCancer Pathways |
| MPL   | myeloproliferative leukemia virus oncogene   | PanCancer Pathways |

|        |   |                    |
|--------|---|--------------------|
| MPO    | myeloperoxidase   | PanCancer Pathways |
| MSH2   | mutS homolog 2  | PanCancer Pathways |
| MSH6   | mutS homolog 6  | PanCancer Pathways |
| MTOR   | mechanistic target of rapamycin (serine/threonine kinase)                           | PanCancer Pathways |
| MUTYH  | mutY homolog  | PanCancer Pathways |
| MYB    | v-myb avian myeloblastosis viral oncogene homolog                                   | PanCancer Pathways |
| MYC    | v-myc avian myelocytomatosis viral oncogene homolog                                 | PanCancer Pathways |
| MYCN   | v-myc avian myelocytomatosis viral oncogene neuroblastoma derived homolog           | PanCancer Pathways |
| MYD88  | myeloid differentiation primary response 88   | PanCancer Pathways |
| NASP   | nuclear autoantigenic sperm protein (histone-binding)                               | PanCancer Pathways |
| NBN    | nibrin  | PanCancer Pathways |
| NCOR1  | nuclear receptor corepressor 1  | PanCancer Pathways |
| NF1    | neurofibromin 1   | PanCancer Pathways |
| NF2    | neurofibromin 2 (merlin)  | PanCancer Pathways |
| NFATC1 | nuclear factor of activated T-cells, cytoplasmic, calcineurin-dependent 1           | PanCancer Pathways |
| NFE2L2 | nuclear factor, erythroid 2-like 2  | PanCancer Pathways |
| NFKB1  | nuclear factor of kappa light polypeptide gene enhancer in B-cells 1                | PanCancer Pathways |
| NFKBIA | nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, alpha | PanCancer Pathways |
| NFKBIZ | nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, zeta  | PanCancer Pathways |
| NGF    | nerve growth factor (beta polypeptide)  | PanCancer Pathways |
| NGFR   | nerve growth factor receptor  | PanCancer Pathways |
| NKD1   | naked cuticle homolog 1 (Drosophila)  | PanCancer Pathways |
| NODAL  | nodal growth differentiation factor   | PanCancer Pathways |



|        |  |                    |
|--------|--|--------------------|
| NOG    | noggin   | PanCancer Pathways |
| NOS3   | nitric oxide synthase 3 (endothelial cell)             | PanCancer Pathways |
| NOTCH1 | notch 1  | PanCancer Pathways |
| NOTCH2 | notch 2  | PanCancer Pathways |
| NOTCH3 | notch 3  | PanCancer Pathways |
| NPM1   | nucleophosmin (nucleolar phosphoprotein B23, numatrin) | PanCancer Pathways |
| NPM2   | nucleophosmin/nucleoplasmin 2                          | PanCancer Pathways |
| NR4A1  | nuclear receptor subfamily 4, group A, member 1        | PanCancer Pathways |
| NR4A3  | nuclear receptor subfamily 4, group A, member 3        | PanCancer Pathways |
| NRAS   | neuroblastoma RAS viral (v-ras) oncogene homolog       | PanCancer Pathways |
| NSD1   | nuclear receptor binding SET domain protein 1          | PanCancer Pathways |
| NTF3   | neurotrophin 3   | PanCancer Pathways |
| NTHL1  | nth endonuclease III-like 1 (E. coli)                  | PanCancer Pathways |
| NTRK1  | neurotrophic tyrosine kinase, receptor, type 1         | PanCancer Pathways |
| NTRK2  | neurotrophic tyrosine kinase, receptor, type 2         | PanCancer Pathways |
| NUMBL  | numb homolog (Drosophila)-like                         | PanCancer Pathways |
| NUPR1  | nuclear protein, transcriptional regulator, 1          | PanCancer Pathways |
| OSM    | oncostatin M   | PanCancer Pathways |
| PAK3   | p21 protein (Cdc42/Rac)-activated kinase 3             | PanCancer Pathways |
| PAK7   | p21 protein (Cdc42/Rac)-activated kinase 7             | PanCancer Pathways |
| PAX3   | paired box 3   | PanCancer Pathways |
| PAX5   | paired box 5   | PanCancer Pathways |
| PAX8   | paired box 8   | PanCancer Pathways |

|        |   |                    |
|--------|---|--------------------|
| PBRM1  | polybromo 1   | PanCancer Pathways |
| PBX1   | pre-B-cell leukemia homeobox 1  | PanCancer Pathways |
| PBX3   | pre-B-cell leukemia homeobox 3  | PanCancer Pathways |
| PCK1   | phosphoenolpyruvate carboxykinase 1 (soluble)                           | PanCancer Pathways |
| PCNA   | proliferating cell nuclear antigen                                      | PanCancer Pathways |
| PDGFA  | platelet-derived growth factor alpha polypeptide                        | PanCancer Pathways |
| PDGFB  | platelet-derived growth factor beta polypeptide                         | PanCancer Pathways |
| PDGFC  | platelet derived growth factor C  | PanCancer Pathways |
| PDGFD  | platelet derived growth factor D  | PanCancer Pathways |
| PDGFRA | platelet-derived growth factor receptor, alpha polypeptide              | PanCancer Pathways |
| PDGFRB | platelet-derived growth factor receptor, beta polypeptide               | PanCancer Pathways |
| PGF    | placental growth factor   | PanCancer Pathways |
| PHF6   | PHD finger protein 6  | PanCancer Pathways |
| PIK3CA | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit alpha | PanCancer Pathways |
| PIK3CB | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit beta  | PanCancer Pathways |
| PIK3CD | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit delta | PanCancer Pathways |
| PIK3CG | phosphatidylinositol-4,5-bisphosphate 3-kinase, catalytic subunit gamma | PanCancer Pathways |
| PIK3R1 | phosphoinositide-3-kinase, regulatory subunit 1 (alpha)                 | PanCancer Pathways |
| PIK3R2 | phosphoinositide-3-kinase, regulatory subunit 2 (beta)                  | PanCancer Pathways |
| PIK3R3 | phosphoinositide-3-kinase, regulatory subunit 3 (gamma)                 | PanCancer Pathways |
| PIK3R5 | phosphoinositide-3-kinase, regulatory subunit 5                         | PanCancer Pathways |
| PIM1   | pim-1 oncogene  | PanCancer Pathways |
| PITX2  | paired-like homeodomain 2   | PanCancer Pathways |

|         |  |                    |
|---------|--|--------------------|
| PKMYT1  | protein kinase, membrane associated tyrosine/threonine 1     | PanCancer Pathways |
| PLA1A   | phospholipase A1 member A                                    | PanCancer Pathways |
| PLA2G10 | phospholipase A2, group X                                    | PanCancer Pathways |
| PLA2G2A | phospholipase A2, group IIA (platelets, synovial fluid)      | PanCancer Pathways |
| PLA2G3  | phospholipase A2, group III                                  | PanCancer Pathways |
| PLA2G4A | phospholipase A2, group IVA (cytosolic, calcium-dependent)   | PanCancer Pathways |
| PLA2G4C | phospholipase A2, group IVC (cytosolic, calcium-independent) | PanCancer Pathways |
| PLA2G4E | phospholipase A2, group IVE                                  | PanCancer Pathways |
| PLA2G4F | phospholipase A2, group IVF                                  | PanCancer Pathways |
| PLA2G5  | phospholipase A2, group V                                    | PanCancer Pathways |
| PLAT    | plasminogen activator, tissue                                | PanCancer Pathways |
| PLAU    | plasminogen activator, urokinase                             | PanCancer Pathways |
| PLCB1   | phospholipase C, beta 1 (phosphoinositide-specific)          | PanCancer Pathways |
| PLCB4   | phospholipase C, beta 4                                      | PanCancer Pathways |
| PLCE1   | phospholipase C, epsilon 1                                   | PanCancer Pathways |
| PLCG2   | phospholipase C, gamma 2 (phosphatidylinositol-specific)     | PanCancer Pathways |
| PLD1    | phospholipase D1, phosphatidylcholine-specific               | PanCancer Pathways |
| PML     | promyelocytic leukemia                                       | PanCancer Pathways |
| POLB    | polymerase (DNA directed), beta                              | PanCancer Pathways |
| POLD1   | polymerase (DNA directed), delta 1, catalytic subunit        | PanCancer Pathways |
| POLD4   | polymerase (DNA-directed), delta 4, accessory subunit        | PanCancer Pathways |
| POLE2   | polymerase (DNA directed), epsilon 2, accessory subunit      | PanCancer Pathways |
| POLR2D  | polymerase (RNA) II (DNA directed) polypeptide D             | PanCancer Pathways |

|          |   |                    |
|----------|---|--------------------|
| POLR2H   | polymerase (RNA) II (DNA directed) polypeptide H                      | PanCancer Pathways |
| POLR2J   | polymerase (RNA) II (DNA directed) polypeptide J, 13.3kDa             | PanCancer Pathways |
| PPARG    | peroxisome proliferator-activated receptor gamma                      | PanCancer Pathways |
| PPARGC1A | peroxisome proliferator-activated receptor gamma, coactivator 1 alpha | PanCancer Pathways |
| PPP2CB   | protein phosphatase 2, catalytic subunit, beta isozyme                | PanCancer Pathways |
| PPP2R1A  | protein phosphatase 2, regulatory subunit A, alpha                    | PanCancer Pathways |
| PPP2R2B  | protein phosphatase 2, regulatory subunit B, beta                     | PanCancer Pathways |
| PPP2R2C  | protein phosphatase 2, regulatory subunit B, gamma                    | PanCancer Pathways |
| PPP3CA   | protein phosphatase 3, catalytic subunit, alpha isozyme               | PanCancer Pathways |
| PPP3CB   | protein phosphatase 3, catalytic subunit, beta isozyme                | PanCancer Pathways |
| PPP3CC   | protein phosphatase 3, catalytic subunit, gamma isozyme               | PanCancer Pathways |
| PPP3R1   | protein phosphatase 3, regulatory subunit B, alpha                    | PanCancer Pathways |
| PPP3R2   | protein phosphatase 3, regulatory subunit B, beta                     | PanCancer Pathways |
| PRDM1    | PR domain containing 1, with ZNF domain                               | PanCancer Pathways |
| PRKAA2   | protein kinase, AMP-activated, alpha 2 catalytic subunit              | PanCancer Pathways |
| PRKACA   | protein kinase, cAMP-dependent, catalytic, alpha                      | PanCancer Pathways |
| PRKACB   | protein kinase, cAMP-dependent, catalytic, beta                       | PanCancer Pathways |
| PRKACG   | protein kinase, cAMP-dependent, catalytic, gamma                      | PanCancer Pathways |
| PRKAR1B  | protein kinase, cAMP-dependent, regulatory, type I, beta              | PanCancer Pathways |
| PRKAR2A  | protein kinase, cAMP-dependent, regulatory, type II, alpha            | PanCancer Pathways |
| PRKAR2B  | protein kinase, cAMP-dependent, regulatory, type II, beta             | PanCancer Pathways |
| PRKCA    | protein kinase C, alpha   | PanCancer Pathways |
| PRKCB    | protein kinase C, beta  | PanCancer Pathways |

|        |   |                    |
|--------|---|--------------------|
| PRKCG  | protein kinase C, gamma   | PanCancer Pathways |
| PRKDC  | protein kinase, DNA-activated, catalytic polypeptide                                    | PanCancer Pathways |
| PRKX   | protein kinase, X-linked  | PanCancer Pathways |
| PRL    | prolactin   | PanCancer Pathways |
| PRLR   | prolactin receptor  | PanCancer Pathways |
| PRMT8  | protein arginine methyltransferase 8  | PanCancer Pathways |
| PROM1  | prominin 1  | PanCancer Pathways |
| PTCH1  | patched 1   | PanCancer Pathways |
| PTCRA  | pre T-cell antigen receptor alpha   | PanCancer Pathways |
| PTEN   | phosphatase and tensin homolog  | PanCancer Pathways |
| PTPN11 | protein tyrosine phosphatase, non-receptor type 11                                      | PanCancer Pathways |
| PTPN5  | protein tyrosine phosphatase, non-receptor type 5 (striatum-enriched)                   | PanCancer Pathways |
| PTPRR  | protein tyrosine phosphatase, receptor type, R  | PanCancer Pathways |
| PTTG2  | pituitary tumor-transforming 2  | PanCancer Pathways |
| RAC1   | ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) | PanCancer Pathways |
| RAC2   | ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2) | PanCancer Pathways |
| RAC3   | ras-related C3 botulinum toxin substrate 3 (rho family, small GTP binding protein Rac3) | PanCancer Pathways |
| RAD21  | RAD21 homolog ( <i>S. pombe</i> )   | PanCancer Pathways |
| RAD50  | RAD50 homolog ( <i>S. cerevisiae</i> )  | PanCancer Pathways |
| RAD51  | RAD51 recombinase   | PanCancer Pathways |
| RAD52  | RAD52 homolog ( <i>S. cerevisiae</i> )  | PanCancer Pathways |
| RAF1   | v-raf-1 murine leukemia viral oncogene homolog 1  | PanCancer Pathways |
| RASA4  | RAS p21 protein activator 4   | PanCancer Pathways |

|         |  |                    |
|---------|--|--------------------|
| RASAL1  | RAS protein activator like 1 (GAP1 like)                                   | PanCancer Pathways |
| RASGRF1 | Ras protein-specific guanine nucleotide-releasing factor 1                 | PanCancer Pathways |
| RASGRF2 | Ras protein-specific guanine nucleotide-releasing factor 2                 | PanCancer Pathways |
| RASGRP1 | RAS guanyl releasing protein 1 (calcium and DAG-regulated)                 | PanCancer Pathways |
| RASGRP2 | RAS guanyl releasing protein 2 (calcium and DAG-regulated)                 | PanCancer Pathways |
| RB1     | retinoblastoma 1   | PanCancer Pathways |
| RBX1    | ring-box 1, E3 ubiquitin protein ligase                                    | PanCancer Pathways |
| RELA    | v-rel avian reticuloendotheliosis viral oncogene homolog A                 | PanCancer Pathways |
| RELN    | reelin   | PanCancer Pathways |
| RET     | ret proto-oncogene   | PanCancer Pathways |
| RFC3    | replication factor C (activator 1) 3, 38kDa                                | PanCancer Pathways |
| RFC4    | replication factor C (activator 1) 4, 37kDa                                | PanCancer Pathways |
| RHOA    | ras homolog family member A  | PanCancer Pathways |
| RIN1    | Ras and Rab interactor 1   | PanCancer Pathways |
| RNF43   | ring finger protein 43   | PanCancer Pathways |
| RPA3    | replication protein A3, 14kDa  | PanCancer Pathways |
| RPS27A  | ribosomal protein S27a   | PanCancer Pathways |
| RPS6KA5 | ribosomal protein S6 kinase, 90kDa, polypeptide 5                          | PanCancer Pathways |
| RPS6KA6 | ribosomal protein S6 kinase, 90kDa, polypeptide 6                          | PanCancer Pathways |
| RRAS2   | related RAS viral (r-ras) oncogene homolog 2                               | PanCancer Pathways |
| RUNX1   | runt-related transcription factor 1  | PanCancer Pathways |
| RUNX1T1 | runt-related transcription factor 1; translocated to, 1 (cyclin D-related) | PanCancer Pathways |
| RXRG    | retinoid X receptor, gamma   | PanCancer Pathways |

|         |   |                    |
|---------|---|--------------------|
| SETBP1  | SET binding protein 1   | PanCancer Pathways |
| SETD2   | SET domain containing 2   | PanCancer Pathways |
| SF3B1   | splicing factor 3b, subunit 1, 155kDa   | PanCancer Pathways |
| SFN     | stratifin   | PanCancer Pathways |
| SFRP1   | secreted frizzled-related protein 1   | PanCancer Pathways |
| SFRP2   | secreted frizzled-related protein 2   | PanCancer Pathways |
| SFRP4   | secreted frizzled-related protein 4   | PanCancer Pathways |
| SGK2    | serum/glucocorticoid regulated kinase 2   | PanCancer Pathways |
| SHC1    | SHC (Src homology 2 domain containing) transforming protein 1                                     | PanCancer Pathways |
| SHC2    | SHC (Src homology 2 domain containing) transforming protein 2                                     | PanCancer Pathways |
| SHC3    | SHC (Src homology 2 domain containing) transforming protein 3                                     | PanCancer Pathways |
| SHC4    | SHC (Src homology 2 domain containing) family, member 4   | PanCancer Pathways |
| SIN3A   | SIN3 transcription regulator family member A  | PanCancer Pathways |
| SIRT4   | sirtuin 4   | PanCancer Pathways |
| SIX1    | SIX homeobox 1  | PanCancer Pathways |
| SKP1    | S-phase kinase-associated protein 1   | PanCancer Pathways |
| SKP2    | S-phase kinase-associated protein 2, E3 ubiquitin protein ligase                                  | PanCancer Pathways |
| SMAD2   | SMAD family member 2  | PanCancer Pathways |
| SMAD3   | SMAD family member 3  | PanCancer Pathways |
| SMAD4   | SMAD family member 4  | PanCancer Pathways |
| SMAD9   | SMAD family member 9  | PanCancer Pathways |
| SMARCA4 | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily a, member 4 | PanCancer Pathways |
| SMARCB1 | SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily b, member 1 | PanCancer Pathways |

|       |  |                    |
|-------|--|--------------------|
| SMC1A | structural maintenance of chromosomes 1A   | PanCancer Pathways |
| SMC1B | structural maintenance of chromosomes 1B   | PanCancer Pathways |
| SMC3  | structural maintenance of chromosomes 3  | PanCancer Pathways |
| SMO   | smoothened, frizzled family receptor   | PanCancer Pathways |
| SOCS1 | suppressor of cytokine signaling 1   | PanCancer Pathways |
| SOCS2 | suppressor of cytokine signaling 2   | PanCancer Pathways |
| SOCS3 | suppressor of cytokine signaling 3   | PanCancer Pathways |
| SOS1  | son of sevenless homolog 1 (Drosophila)  | PanCancer Pathways |
| SOS2  | son of sevenless homolog 2 (Drosophila)  | PanCancer Pathways |
| SOST  | sclerostin   | PanCancer Pathways |
| SOX17 | SRY (sex determining region Y)-box 17  | PanCancer Pathways |
| SOX9  | SRY (sex determining region Y)-box 9   | PanCancer Pathways |
| SP1   | Sp1 transcription factor   | PanCancer Pathways |
| SPOP  | speckle-type POZ protein   | PanCancer Pathways |
| SPP1  | secreted phosphoprotein 1  | PanCancer Pathways |
| SPRY1 | sprouty homolog 1, antagonist of FGF signaling (Drosophila)                      | PanCancer Pathways |
| SPRY2 | sprouty homolog 2 (Drosophila)   | PanCancer Pathways |
| SPRY4 | sprouty homolog 4 (Drosophila)   | PanCancer Pathways |
| SRSF2 | serine/arginine-rich splicing factor 2   | PanCancer Pathways |
| SSX1  | synovial sarcoma, X breakpoint 1   | PanCancer Pathways |
| STAG2 | stromal antigen 2  | PanCancer Pathways |
| STAT1 | signal transducer and activator of transcription 1, 91kDa                        | PanCancer Pathways |
| STAT3 | signal transducer and activator of transcription 3 (acute-phase response factor) | PanCancer Pathways |



|         |  |                    |
|---------|--|--------------------|
| STAT4   | signal transducer and activator of transcription 4       | PanCancer Pathways |
| STK11   | serine/threonine kinase 11                               | PanCancer Pathways |
| STMN1   | stathmin 1   | PanCancer Pathways |
| SUV39H2 | suppressor of variegation 3-9 homolog 2 (Drosophila)     | PanCancer Pathways |
| SYK     | spleen tyrosine kinase                                   | PanCancer Pathways |
| TBL1XR1 | transducin (beta)-like 1 X-linked receptor 1             | PanCancer Pathways |
| TCF3    | transcription factor 3                                   | PanCancer Pathways |
| TCF7L1  | transcription factor 7-like 1 (T-cell specific, HMG-box) | PanCancer Pathways |
| TCL1B   | T-cell leukemia/lymphoma 1B                              | PanCancer Pathways |
| TET2    | tet methylcytosine dioxygenase 2                         | PanCancer Pathways |
| TFDP1   | transcription factor Dp-1                                | PanCancer Pathways |
| TGFB1   | transforming growth factor, beta 1                       | PanCancer Pathways |
| TGFB2   | transforming growth factor, beta 2                       | PanCancer Pathways |
| TGFB3   | transforming growth factor, beta 3                       | PanCancer Pathways |
| TGFBR2  | transforming growth factor, beta receptor II (70/80kDa)  | PanCancer Pathways |
| THBS1   | thrombospondin 1   | PanCancer Pathways |
| THBS4   | thrombospondin 4   | PanCancer Pathways |
| THEM4   | thioesterase superfamily member 4                        | PanCancer Pathways |
| TIAM1   | T-cell lymphoma invasion and metastasis 1                | PanCancer Pathways |
| TLR2    | toll-like receptor 2                                     | PanCancer Pathways |
| TLR4    | toll-like receptor 4                                     | PanCancer Pathways |
| TLX1    | T-cell leukemia homeobox 1                               | PanCancer Pathways |
| TMPRSS2 | transmembrane protease, serine 2                         | PanCancer Pathways |

|            |   |                    |
|------------|---|--------------------|
| TNC        | tenascin C  | PanCancer Pathways |
| TNF        | tumor necrosis factor   | PanCancer Pathways |
| TNFAIP3    | tumor necrosis factor, alpha-induced protein 3  | PanCancer Pathways |
| TNFRSF10 A | tumor necrosis factor receptor superfamily, member 10a  | PanCancer Pathways |
| TNFRSF10 B | tumor necrosis factor receptor superfamily, member 10b  | PanCancer Pathways |
| TNFRSF10 C | tumor necrosis factor receptor superfamily, member 10c, decoy without an intracellular domain | PanCancer Pathways |
| TNFRSF10 D | tumor necrosis factor receptor superfamily, member 10d, decoy with truncated death domain     | PanCancer Pathways |
| TNFSF10    | tumor necrosis factor (ligand) superfamily, member 10   | PanCancer Pathways |
| TNN        | tenascin N  | PanCancer Pathways |
| TNR        | tenascin R  | PanCancer Pathways |
| TP53       | tumor protein p53   | PanCancer Pathways |
| TPO        | thyroid peroxidase  | PanCancer Pathways |
| TRAF7      | TNF receptor-associated factor 7, E3 ubiquitin protein ligase                                 | PanCancer Pathways |
| TSC1       | tuberous sclerosis 1  | PanCancer Pathways |
| TSHR       | thyroid stimulating hormone receptor  | PanCancer Pathways |
| TSLP       | thymic stromal lymphopoietin  | PanCancer Pathways |
| TSPAN7     | tetraspanin 7   | PanCancer Pathways |
| TTK        | TTK protein kinase  | PanCancer Pathways |
| U2AF1      | U2 small nuclear RNA auxiliary factor 1   | PanCancer Pathways |
| UBB        | ubiquitin B   | PanCancer Pathways |
| UBE2T      | ubiquitin-conjugating enzyme E2T (putative)   | PanCancer Pathways |
| UTY        | ubiquitously transcribed tetratricopeptide repeat containing, Y-linked                        | PanCancer Pathways |
| VEGFA      | vascular endothelial growth factor A  | PanCancer Pathways |

|         |  |                    |
|---------|--|--------------------|
| VEGFC   | vascular endothelial growth factor C                                   | PanCancer Pathways |
| VHL     | von Hippel-Lindau tumor suppressor, E3 ubiquitin protein ligase        | PanCancer Pathways |
| WEE1    | WEE1 G2 checkpoint kinase  | PanCancer Pathways |
| WHSC1   | Wolf-Hirschhorn syndrome candidate 1                                   | PanCancer Pathways |
| WHSC1L1 | Wolf-Hirschhorn syndrome candidate 1-like 1                            | PanCancer Pathways |
| WIF1    | WNT inhibitory factor 1  | PanCancer Pathways |
| WNT10A  | wingless-type MMTV integration site family, member 10A                 | PanCancer Pathways |
| WNT10B  | wingless-type MMTV integration site family, member 10B                 | PanCancer Pathways |
| WNT11   | wingless-type MMTV integration site family, member 11                  | PanCancer Pathways |
| WNT16   | wingless-type MMTV integration site family, member 16                  | PanCancer Pathways |
| WNT2    | wingless-type MMTV integration site family member 2                    | PanCancer Pathways |
| WNT2B   | wingless-type MMTV integration site family, member 2B                  | PanCancer Pathways |
| WNT3    | wingless-type MMTV integration site family, member 3                   | PanCancer Pathways |
| WNT4    | wingless-type MMTV integration site family, member 4                   | PanCancer Pathways |
| WNT5A   | wingless-type MMTV integration site family, member 5A                  | PanCancer Pathways |
| WNT5B   | wingless-type MMTV integration site family, member 5B                  | PanCancer Pathways |
| WNT6    | wingless-type MMTV integration site family, member 6                   | PanCancer Pathways |
| WNT7A   | wingless-type MMTV integration site family, member 7A                  | PanCancer Pathways |
| WNT7B   | wingless-type MMTV integration site family, member 7B                  | PanCancer Pathways |
| WT1     | Wilms tumor 1  | PanCancer Pathways |
| XPA     | xeroderma pigmentosum, complementation group A                         | PanCancer Pathways |
| XRCC4   | X-ray repair complementing defective repair in Chinese hamster cells 4 | PanCancer Pathways |
| ZAK     | sterile alpha motif and leucine zipper containing kinase AZK           | PanCancer Pathways |

|          |   |                    |
|----------|---|--------------------|
| ZBTB16   | zinc finger and BTB domain containing 16  | PanCancer Pathways |
| ZBTB32   | zinc finger and BTB domain containing 32  | PanCancer Pathways |
| ZIC2     | Zic family member 2   | PanCancer Pathways |
| ACAD9    | acyl-CoA dehydrogenase family, member 9   | PanCancer Pathways |
| AGK      | acylglycerol kinase   | PanCancer Pathways |
| AMMECR1L | AMMECR1-like  | PanCancer Pathways |
| C10orf76 | chromosome 10 open reading frame 76   | PanCancer Pathways |
| CC2D1B   | coiled-coil and C2 domain containing 1B   | PanCancer Pathways |
| CNOT10   | CCR4-NOT transcription complex, subunit 10  | PanCancer Pathways |
| CNOT4    | CCR4-NOT transcription complex, subunit 4   | PanCancer Pathways |
| COG7     | component of oligomeric golgi complex 7   | PanCancer Pathways |
| DDX50    | DEAD (Asp-Glu-Ala-Asp) box polypeptide 50   | PanCancer Pathways |
| DHX16    | DEAH (Asp-Glu-Ala-His) box polypeptide 16   | PanCancer Pathways |
| DNAJC14  | DnaJ (Hsp40) homolog, subfamily C, member 14  | PanCancer Pathways |
| EDC3     | enhancer of mRNA decapping 3  | PanCancer Pathways |
| EIF2B4   | eukaryotic translation initiation factor 2B, subunit 4 delta, 67kDa                   | PanCancer Pathways |
| ERCC3    | excision repair cross-complementing rodent repair deficiency, complementation group 3 | PanCancer Pathways |
| FCF1     | FCF1 rRNA-processing protein  | PanCancer Pathways |
| FTSJ2    | FtsJ RNA methyltransferase homolog 2 (E. coli)  | PanCancer Pathways |
| GPATCH3  | G patch domain containing 3   | PanCancer Pathways |
| HDAC3    | histone deacetylase 3   | PanCancer Pathways |
| MRPS5    | mitochondrial ribosomal protein S5  | PanCancer Pathways |
| MTMR14   | myotubularin related protein 14   | PanCancer Pathways |

|          |  |                       |
|----------|--|-----------------------|
| NOL7     | nucleolar protein 7, 27kDa   | PanCancer Pathways    |
| NUBP1    | nucleotide binding protein 1   | PanCancer Pathways    |
| PIAS1    | protein inhibitor of activated STAT, 1                               | PanCancer Pathways    |
| PIK3R4   | phosphoinositide-3-kinase, regulatory subunit 4                      | PanCancer Pathways    |
| PRPF38A  | pre-mRNA processing factor 38A                                       | PanCancer Pathways    |
| RBM45    | RNA binding motif protein 45   | PanCancer Pathways    |
| SAP130   | Sin3A-associated protein, 130kDa                                     | PanCancer Pathways    |
| SF3A3    | splicing factor 3a, subunit 3, 60kDa                                 | PanCancer Pathways    |
| SLC4A1AP | solute carrier family 4 (anion exchanger), member 1, adaptor protein | PanCancer Pathways    |
| TLK2     | tousled-like kinase 2  | PanCancer Pathways    |
| TMUB2    | transmembrane and ubiquitin-like domain containing 2                 | PanCancer Pathways    |
| TRIM39   | tripartite motif containing 39                                       | PanCancer Pathways    |
| TTC31    | tetratricopeptide repeat domain 31                                   | PanCancer Pathways    |
| USP39    | ubiquitin specific peptidase 39                                      | PanCancer Pathways    |
| VPS33B   | vacuolar protein sorting 33 homolog B (yeast)                        | PanCancer Pathways    |
| ZC3H14   | zinc finger CCCH-type containing 14                                  | PanCancer Pathways    |
| ZKSCAN5  | zinc finger with KRAB and SCAN domains 5                             | PanCancer Pathways    |
| ZNF143   | zinc finger protein 143  | PanCancer Pathways    |
| ZNF346   | zinc finger protein 346  | PanCancer Pathways    |
| ZNF384   | zinc finger protein 384  | PanCancer Pathways    |
| AAMP     | angio associated migratory cell protein                              | PanCancer Progression |
| ABI3BP   | ABI family member 3 binding protein                                  | PanCancer Progression |
| ACHE     | acetylcholinesterase (Cartwright blood group)                        | PanCancer Progression |

|           |   |                       |
|-----------|---|-----------------------|
| ACTG2     | actin, gamma 2, smooth muscle, enteric                          | PanCancer Progression |
| ACVR1     | activin A receptor type 1                                       | PanCancer Progression |
| ACVR1C    | activin A receptor type 1C                                      | PanCancer Progression |
| ACVRL1    | activin A receptor like type 1                                  | PanCancer Progression |
| ADAM15    | ADAM metallopeptidase domain 15                                 | PanCancer Progression |
| ADAM17    | ADAM metallopeptidase domain 17                                 | PanCancer Progression |
| ADAM28    | ADAM metallopeptidase domain 28                                 | PanCancer Progression |
| ADAM8     | ADAM metallopeptidase domain 8                                  | PanCancer Progression |
| ADAM9     | ADAM metallopeptidase domain 9                                  | PanCancer Progression |
| ADAMTS1   | ADAM metallopeptidase with thrombospondin type 1 motif 1        | PanCancer Progression |
| ADAMTS1 2 | ADAM metallopeptidase with thrombospondin type 1 motif 12       | PanCancer Progression |
| ADAMTS8   | ADAM metallopeptidase with thrombospondin type 1 motif 8        | PanCancer Progression |
| ADAP1     | ArfGAP with dual PH domains 1                                   | PanCancer Progression |
| ADD1      | adducin 1   | PanCancer Progression |
| ADM2      | adrenomedullin 2  | PanCancer Progression |
| ADRA2B    | adrenoceptor alpha 2B   | PanCancer Progression |
| AEBP1     | AE binding protein 1  | PanCancer Progression |
| AGGF1     | angiogenic factor with G-patch and FHA domains 1                | PanCancer Progression |
| AGR2      | anterior gradient 2, protein disulphide isomerase family member | PanCancer Progression |
| AGRN      | agrin   | PanCancer Progression |
| AGT       | angiotensinogen   | PanCancer Progression |
| AHNAK     | AHNAK nucleoprotein   | PanCancer Progression |
| AKAP12    | A-kinase anchoring protein 12                                   | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| AKAP2   | A-kinase anchoring protein 2                              | PanCancer Progression |
| AKT1    | AKT serine/threonine kinase 1                             | PanCancer Progression |
| AKT2    | AKT serine/threonine kinase 2                             | PanCancer Progression |
| AKT3    | AKT serine/threonine kinase 3                             | PanCancer Progression |
| ALB     | albumin   | PanCancer Progression |
| ALDOA   | aldolase, fructose-bisphosphate A                         | PanCancer Progression |
| ALOX5   | arachidonate 5-lipoxygenase                               | PanCancer Progression |
| AMH     | anti-Mullerian hormone                                    | PanCancer Progression |
| ANG     | angiogenin  | PanCancer Progression |
| ANGPT1  | angiopoietin 1  | PanCancer Progression |
| ANGPT2  | angiopoietin 2  | PanCancer Progression |
| ANGPTL2 | angiopoietin like 2                                       | PanCancer Progression |
| ANGPTL4 | angiopoietin like 4                                       | PanCancer Progression |
| ANPEP   | alanyl aminopeptidase, membrane                           | PanCancer Progression |
| ANXA2P2 | annexin A2 pseudogene 2                                   | PanCancer Progression |
| AP1M2   | adaptor related protein complex 1 mu 2 subunit            | PanCancer Progression |
| APC     | APC, WNT signaling pathway regulator                      | PanCancer Progression |
| APOD    | apolipoprotein D  | PanCancer Progression |
| APOE    | apolipoprotein E  | PanCancer Progression |
| APOH    | apolipoprotein H  | PanCancer Progression |
| AQP1    | aquaporin 1 (Colton blood group)                          | PanCancer Progression |
| ARAP2   | ArfGAP with RhoGAP domain, ankyrin repeat and PH domain 2 | PanCancer Progression |
| AREG    | amphiregulin  | PanCancer Progression |

|              |   |                          |
|--------------|---|--------------------------|
| ARHGAP3<br>2 | Rho GTPase activating protein 32                              | PanCancer<br>Progression |
| ARHGDIB      | Rho GDP dissociation inhibitor beta                           | PanCancer<br>Progression |
| ASPN         | asporin   | PanCancer<br>Progression |
| ATPIF1       | ATP synthase inhibitory factor subunit 1                      | PanCancer<br>Progression |
| B3GNT3       | UDP-GlcNAc:betaGal beta-1,3-N-acetylglucosaminyltransferase 3 | PanCancer<br>Progression |
| BAD          | BCL2 associated agonist of cell death                         | PanCancer<br>Progression |
| BAG2         | BCL2 associated athanogene 2                                  | PanCancer<br>Progression |
| BAI1         | BAI1 associated protein 2                                     | PanCancer<br>Progression |
| BAI3         | adhesion G protein-coupled receptor B3                        | PanCancer<br>Progression |
| BCAS1        | breast carcinoma amplified sequence 1                         | PanCancer<br>Progression |
| BGN          | biglycan  | PanCancer<br>Progression |
| BICC1        | BicC family RNA binding protein 1                             | PanCancer<br>Progression |
| BMP4         | bone morphogenetic protein 4                                  | PanCancer<br>Progression |
| BMP5         | bone morphogenetic protein 5                                  | PanCancer<br>Progression |
| BMP7         | bone morphogenetic protein 7                                  | PanCancer<br>Progression |
| BMPER        | BMP binding endothelial regulator                             | PanCancer<br>Progression |
| BMPR1A       | bone morphogenetic protein receptor type 1A                   | PanCancer<br>Progression |
| BMPR1B       | bone morphogenetic protein receptor type 1B                   | PanCancer<br>Progression |
| BMPR2        | bone morphogenetic protein receptor type 2                    | PanCancer<br>Progression |
| BNC2         | basonuclin 2  | PanCancer<br>Progression |
| BRMS1        | breast cancer metastasis suppressor 1                         | PanCancer<br>Progression |
| BTG1         | BTG anti-proliferation factor 1                               | PanCancer<br>Progression |
| C1S          | complement C1s  | PanCancer<br>Progression |



|        |  |                       |
|--------|--|-----------------------|
| C3     | complement C3  | PanCancer Progression |
| C3AR1  | complement C3a receptor 1                            | PanCancer Progression |
| CADM1  | cell adhesion molecule 1                             | PanCancer Progression |
| CALCRL | calcitonin receptor like receptor                    | PanCancer Progression |
| CALD1  | caldesmon 1  | PanCancer Progression |
| CAMK2A | calcium/calmodulin dependent protein kinase II alpha | PanCancer Progression |
| CAMK2B | calcium/calmodulin dependent protein kinase II beta  | PanCancer Progression |
| CAMK2D | calcium/calmodulin dependent protein kinase II delta | PanCancer Progression |
| CAMP   | cathelicidin antimicrobial peptide                   | PanCancer Progression |
| CASP8  | caspase 8  | PanCancer Progression |
| CAV1   | caveolin 1   | PanCancer Progression |
| CBLC   | Cbl proto-oncogene C                                 | PanCancer Progression |
| CCBE1  | collagen and calcium binding EGF domains 1           | PanCancer Progression |
| CCDC80 | coiled-coil domain containing 80                     | PanCancer Progression |
| CCL11  | C-C motif chemokine ligand 11                        | PanCancer Progression |
| CCL21  | C-C motif chemokine ligand 21                        | PanCancer Progression |
| CCL5   | C-C motif chemokine ligand 5                         | PanCancer Progression |
| CCL7   | C-C motif chemokine ligand 7                         | PanCancer Progression |
| CCL8   | C-C motif chemokine ligand 8                         | PanCancer Progression |
| CCR2   | C-C motif chemokine receptor 2                       | PanCancer Progression |
| CCR3   | C-C motif chemokine receptor 3                       | PanCancer Progression |
| CD163  | CD163 molecule                                       | PanCancer Progression |
| CD24   | CD24 molecule  | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| CD2AP   | CD2 associated protein                                    | PanCancer Progression |
| CD34    | CD34 molecule   | PanCancer Progression |
| CD36    | CD36 molecule   | PanCancer Progression |
| CD44    | CD44 molecule (Indian blood group)                        | PanCancer Progression |
| CD46    | CD46 molecule   | PanCancer Progression |
| CD82    | CD82 molecule   | PanCancer Progression |
| CDC42   | cell division cycle 42                                    | PanCancer Progression |
| CDH1    | cadherin 1  | PanCancer Progression |
| CDH11   | cadherin 11   | PanCancer Progression |
| CDH13   | cadherin 13   | PanCancer Progression |
| CDH2    | cadherin 2  | PanCancer Progression |
| CDK14   | cyclin dependent kinase 14                                | PanCancer Progression |
| CDKN1A  | cyclin dependent kinase inhibitor 1A                      | PanCancer Progression |
| CDKN2A  | cyclin dependent kinase inhibitor 2A                      | PanCancer Progression |
| CDS1    | CDP-diacylglycerol synthase 1                             | PanCancer Progression |
| CEACAM1 | carcinoembryonic antigen related cell adhesion molecule 1 | PanCancer Progression |
| CEACAM5 | carcinoembryonic antigen related cell adhesion molecule 5 | PanCancer Progression |
| CEACAM6 | carcinoembryonic antigen related cell adhesion molecule 6 | PanCancer Progression |
| CEP170  | centrosomal protein 170                                   | PanCancer Progression |
| CEP295  | centrosomal protein 295                                   | PanCancer Progression |
| CFP     | complement factor properdin                               | PanCancer Progression |
| CGN     | cingulin  | PanCancer Progression |
| CHAD    | chondroadherin  | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| CHD4    | chromodomain helicase DNA binding protein 4    | PanCancer Progression |
| CHI3L1  | chitinase 3 like 1                             | PanCancer Progression |
| CHP1    | calcineurin like EF-hand protein 1             | PanCancer Progression |
| CHP2    | calcineurin like EF-hand protein 2             | PanCancer Progression |
| CHRD1   | chordin like 1                                 | PanCancer Progression |
| CHRNA7  | cholinergic receptor nicotinic alpha 7 subunit | PanCancer Progression |
| CIB1    | calcium and integrin binding 1                 | PanCancer Progression |
| CKMT1A  | creatine kinase, mitochondrial 1A              | PanCancer Progression |
| CLDN1   | claudin 1                                      | PanCancer Progression |
| CLDN3   | claudin 3                                      | PanCancer Progression |
| CLDN4   | claudin 4                                      | PanCancer Progression |
| CLDN7   | claudin 7                                      | PanCancer Progression |
| CLEC2B  | C-type lectin domain family 2 member B         | PanCancer Progression |
| CLEC3B  | C-type lectin domain family 3 member B         | PanCancer Progression |
| CLIC4   | chloride intracellular channel 4               | PanCancer Progression |
| CLU     | clusterin                                      | PanCancer Progression |
| CMA1    | chymase 1                                      | PanCancer Progression |
| CNN1    | calponin 1                                     | PanCancer Progression |
| COL18A1 | collagen type XVIII alpha 1 chain              | PanCancer Progression |
| COL1A1  | collagen type I alpha 1 chain                  | PanCancer Progression |
| COL1A2  | collagen type I alpha 2 chain                  | PanCancer Progression |
| COL3A1  | collagen type III alpha 1 chain                | PanCancer Progression |
| COL4A1  | collagen type IV alpha 1 chain                 | PanCancer Progression |

|          |  |                       |
|----------|--|-----------------------|
| COL4A2   | collagen type IV alpha 2 chain                           | PanCancer Progression |
| COL4A6   | collagen type IV alpha 6 chain                           | PanCancer Progression |
| COL5A1   | collagen type V alpha 1 chain                            | PanCancer Progression |
| COL5A2   | collagen type V alpha 2 chain                            | PanCancer Progression |
| COL6A1   | collagen type VI alpha 1 chain                           | PanCancer Progression |
| COL6A2   | collagen type VI alpha 2 chain                           | PanCancer Progression |
| COL6A3   | collagen type VI alpha 3 chain                           | PanCancer Progression |
| COL7A1   | collagen type VII alpha 1 chain                          | PanCancer Progression |
| COMP     | cartilage oligomeric matrix protein                      | PanCancer Progression |
| CREBBP   | CREB binding protein                                     | PanCancer Progression |
| CRIP2    | cysteine rich protein 2                                  | PanCancer Progression |
| CRISPLD2 | cysteine rich secretory protein LCCL domain containing 2 | PanCancer Progression |
| CSF2RB   | colony stimulating factor 2 receptor beta common subunit | PanCancer Progression |
| CSPG4    | chondroitin sulfate proteoglycan 4                       | PanCancer Progression |
| CST7     | cystatin F   | PanCancer Progression |
| CTNNB1   | catenin beta 1   | PanCancer Progression |
| CTNND1   | catenin delta 1  | PanCancer Progression |
| CTSG     | cathepsin G  | PanCancer Progression |
| CTSH     | cathepsin H  | PanCancer Progression |
| CTSK     | cathepsin K  | PanCancer Progression |
| CTSL     | cathepsin L  | PanCancer Progression |
| CUL1     | cullin 1   | PanCancer Progression |
| CX3CL1   | C-X3-C motif chemokine ligand 1                          | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| CXADR   | CXADR, Ig-like cell adhesion molecule              | PanCancer Progression |
| CXCL10  | C-X-C motif chemokine ligand 10                    | PanCancer Progression |
| CXCL11  | C-X-C motif chemokine ligand 11                    | PanCancer Progression |
| CXCL12  | C-X-C motif chemokine ligand 12                    | PanCancer Progression |
| CXCL13  | C-X-C motif chemokine ligand 13                    | PanCancer Progression |
| CXCL17  | C-X-C motif chemokine ligand 17                    | PanCancer Progression |
| CXCL8   | C-X-C motif chemokine ligand 8                     | PanCancer Progression |
| CXCR2   | C-X-C motif chemokine receptor 2                   | PanCancer Progression |
| CXCR3   | C-X-C motif chemokine receptor 3                   | PanCancer Progression |
| CXCR4   | C-X-C motif chemokine receptor 4                   | PanCancer Progression |
| CYB561  | cytochrome b561                                    | PanCancer Progression |
| CYBB    | cytochrome b-245 beta chain                        | PanCancer Progression |
| CYP1B1  | cytochrome P450 family 1 subfamily B member 1      | PanCancer Progression |
| DAG1    | dystroglycan 1                                     | PanCancer Progression |
| DCC     | DCC netrin 1 receptor                              | PanCancer Progression |
| DCN     | decorin  | PanCancer Progression |
| DDR2    | discoidin domain receptor tyrosine kinase 2        | PanCancer Progression |
| DENND5A | DENN domain containing 5A                          | PanCancer Progression |
| DENR    | density regulated re-initiation and release factor | PanCancer Progression |
| DESI1   | desumoylating isopeptidase 1                       | PanCancer Progression |
| DICER1  | dicer 1, ribonuclease III                          | PanCancer Progression |
| DLC1    | DLC1 Rho GTPase activating protein                 | PanCancer Progression |
| DLG1    | discs large MAGUK scaffold protein 1               | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| DLL4     | delta like canonical Notch ligand 4                                   | PanCancer Progression |
| DPT      | dermatopontin   | PanCancer Progression |
| DPYSL3   | dihydropyrimidinase like 3  | PanCancer Progression |
| DSC2     | desmocollin 2   | PanCancer Progression |
| DST      | dystonin  | PanCancer Progression |
| ECM1     | extracellular matrix protein 1  | PanCancer Progression |
| ECM2     | extracellular matrix protein 2  | PanCancer Progression |
| ECSCR    | endothelial cell surface expressed chemotaxis and apoptosis regulator | PanCancer Progression |
| EDN1     | endothelin 1  | PanCancer Progression |
| EGF      | epidermal growth factor   | PanCancer Progression |
| EGFL7    | EGF like domain multiple 7  | PanCancer Progression |
| EGFR     | epidermal growth factor receptor                                      | PanCancer Progression |
| EGLN2    | egl-9 family hypoxia inducible factor 2                               | PanCancer Progression |
| EGLN3    | egl-9 family hypoxia inducible factor 3                               | PanCancer Progression |
| EIF2AK3  | eukaryotic translation initiation factor 2 alpha kinase 3             | PanCancer Progression |
| EIF4E2   | eukaryotic translation initiation factor 4E family member 2           | PanCancer Progression |
| EIF4EBP1 | eukaryotic translation initiation factor 4E binding protein 1         | PanCancer Progression |
| ELF3     | E74 like ETS transcription factor 3                                   | PanCancer Progression |
| ELK3     | ELK3, ETS transcription factor  | PanCancer Progression |
| EMCN     | endomucin   | PanCancer Progression |
| EMILIN1  | elastin microfibril interfacer 1                                      | PanCancer Progression |
| EMILIN3  | elastin microfibril interfacer 3                                      | PanCancer Progression |
| EMP3     | epithelial membrane protein 3   | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| ENO1    | enolase 1  | PanCancer Progression |
| ENO2    | enolase 2  | PanCancer Progression |
| ENO3    | enolase 3  | PanCancer Progression |
| ENPEP   | glutamyl aminopeptidase                            | PanCancer Progression |
| ENPP2   | ectonucleotide pyrophosphatase/phosphodiesterase 2 | PanCancer Progression |
| EP300   | E1A binding protein p300                           | PanCancer Progression |
| EPAS1   | endothelial PAS domain protein 1                   | PanCancer Progression |
| EPCAM   | epithelial cell adhesion molecule                  | PanCancer Progression |
| EPHA1   | EPH receptor A1                                    | PanCancer Progression |
| EPHA2   | EPH receptor A2                                    | PanCancer Progression |
| EPHB1   | EPH receptor B1                                    | PanCancer Progression |
| EPHB3   | EPH receptor B3                                    | PanCancer Progression |
| EPHB4   | EPH receptor B4                                    | PanCancer Progression |
| EPN3    | epsin 3  | PanCancer Progression |
| EPS8L1  | EPS8 like 1  | PanCancer Progression |
| ERBB2   | erb-b2 receptor tyrosine kinase 2                  | PanCancer Progression |
| ERBB2IP | erbb2 interacting protein                          | PanCancer Progression |
| ERBB3   | erb-b2 receptor tyrosine kinase 3                  | PanCancer Progression |
| EREG    | epiregulin   | PanCancer Progression |
| ERMP1   | endoplasmic reticulum metallopeptidase 1           | PanCancer Progression |
| ESRP1   | epithelial splicing regulatory protein 1           | PanCancer Progression |
| ETV4    | ETS variant 4                                      | PanCancer Progression |
| EVI2A   | ecotropic viral integration site 2A                | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| EVPL    | envoplakin                                     | PanCancer Progression |
| F11R    | F11 receptor                                   | PanCancer Progression |
| F3      | coagulation factor III, tissue factor          | PanCancer Progression |
| FAM174B | family with sequence similarity 174 member B   | PanCancer Progression |
| FAP     | fibroblast activation protein alpha            | PanCancer Progression |
| FASLG   | Fas ligand                                     | PanCancer Progression |
| FBLN1   | fibulin 1                                      | PanCancer Progression |
| FBLN5   | fibulin 5                                      | PanCancer Progression |
| FBN1    | fibrillin 1                                    | PanCancer Progression |
| FBN2    | fibrillin 2                                    | PanCancer Progression |
| FBP1    | fructose-bisphosphatase 1                      | PanCancer Progression |
| FERMT2  | fermitin family member 2                       | PanCancer Progression |
| FGF18   | fibroblast growth factor 18                    | PanCancer Progression |
| FGF2    | fibroblast growth factor 2                     | PanCancer Progression |
| FGF9    | fibroblast growth factor 9                     | PanCancer Progression |
| FGFR1   | fibroblast growth factor receptor 1            | PanCancer Progression |
| FGFR2   | fibroblast growth factor receptor 2            | PanCancer Progression |
| FGFR3   | fibroblast growth factor receptor 3            | PanCancer Progression |
| FGFR4   | fibroblast growth factor receptor 4            | PanCancer Progression |
| FGL2    | fibrinogen like 2                              | PanCancer Progression |
| FHL1    | four and a half LIM domains 1                  | PanCancer Progression |
| FIGF    | vascular endothelial growth factor D           | PanCancer Progression |
| FLI1    | Fli-1 proto-oncogene, ETS transcription factor | PanCancer Progression |



|        |  |                       |
|--------|--|-----------------------|
| FLT1   | fms related tyrosine kinase 1                    | PanCancer Progression |
| FLT4   | fms related tyrosine kinase 4                    | PanCancer Progression |
| FMOD   | fibromodulin                                     | PanCancer Progression |
| FN1    | fibronectin 1                                    | PanCancer Progression |
| FOXC2  | forkhead box C2                                  | PanCancer Progression |
| FOXO4  | forkhead box O4                                  | PanCancer Progression |
| FRAS1  | Fraser extracellular matrix complex subunit 1    | PanCancer Progression |
| FREM1  | FRAS1 related extracellular matrix 1             | PanCancer Progression |
| FREM2  | FRAS1 related extracellular matrix protein 2     | PanCancer Progression |
| FST    | follistatin                                      | PanCancer Progression |
| FSTL1  | follistatin like 1                               | PanCancer Progression |
| FUT3   | fucosyltransferase 3 (Lewis blood group)         | PanCancer Progression |
| FXVD6  | FXVD domain containing ion transport regulator 6 | PanCancer Progression |
| GALNT7 | polypeptide N-acetylgalactosaminyltransferase 7  | PanCancer Progression |
| GATA4  | GATA binding protein 4                           | PanCancer Progression |
| GDF15  | growth differentiation factor 15                 | PanCancer Progression |
| GDF5   | growth differentiation factor 5                  | PanCancer Progression |
| GDF6   | growth differentiation factor 6                  | PanCancer Progression |
| GIMAP4 | GTPase, IMAP family member 4                     | PanCancer Progression |
| GIMAP6 | GTPase, IMAP family member 6                     | PanCancer Progression |
| GJA5   | gap junction protein alpha 5                     | PanCancer Progression |
| GLYR1  | glyoxylate reductase 1 homolog                   | PanCancer Progression |
| GPI    | glucose-6-phosphate isomerase                    | PanCancer Progression |

|          |  |                       |
|----------|--|-----------------------|
| GPR124   | adhesion G protein-coupled receptor A2                   | PanCancer Progression |
| GPR56    | adhesion G protein-coupled receptor G1                   | PanCancer Progression |
| GPX1     | glutathione peroxidase 1                                 | PanCancer Progression |
| GREM1    | gremlin 1, DAN family BMP antagonist                     | PanCancer Progression |
| GRHL2    | grainyhead like transcription factor 2                   | PanCancer Progression |
| GSN      | gelsolin   | PanCancer Progression |
| GTF2I    | general transcription factor IIIi                        | PanCancer Progression |
| GZMK     | granzyme K   | PanCancer Progression |
| HAPLN1   | hyaluronan and proteoglycan link protein 1               | PanCancer Progression |
| HAS1     | hyaluronan synthase 1                                    | PanCancer Progression |
| HDAC5    | histone deacetylase 5                                    | PanCancer Progression |
| HDHD3    | haloacid dehalogenase like hydrolase domain containing 3 | PanCancer Progression |
| HEG1     | heart development protein with EGF like domains 1        | PanCancer Progression |
| HGF      | hepatocyte growth factor                                 | PanCancer Progression |
| HIF1A    | hypoxia inducible factor 1 alpha subunit                 | PanCancer Progression |
| HIPK1    | homeodomain interacting protein kinase 1                 | PanCancer Progression |
| HIPK2    | homeodomain interacting protein kinase 2                 | PanCancer Progression |
| HK2      | hexokinase 2   | PanCancer Progression |
| HK3      | hexokinase 3   | PanCancer Progression |
| HKDC1    | hexokinase domain containing 1                           | PanCancer Progression |
| HLA-DPB1 | major histocompatibility complex, class II, DP beta 1    | PanCancer Progression |
| HMOX1    | heme oxygenase 1   | PanCancer Progression |
| HOXA5    | homeobox A5  | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| HOXA7    | homeobox A7                                   | PanCancer Progression |
| HOXB13   | homeobox B13                                  | PanCancer Progression |
| HOXB3    | homeobox B3                                   | PanCancer Progression |
| HPSE     | heparanase                                    | PanCancer Progression |
| HRAS     | HRas proto-oncogene, GTPase                   | PanCancer Progression |
| HSD17B12 | hydroxysteroid 17-beta dehydrogenase 12       | PanCancer Progression |
| HSP90B1  | heat shock protein 90 beta family member 1    | PanCancer Progression |
| HSPB1    | heat shock protein family B (small) member 1  | PanCancer Progression |
| HSPG2    | heparan sulfate proteoglycan 2                | PanCancer Progression |
| HUNK     | hormonally up-regulated Neu-associated kinase | PanCancer Progression |
| IBSP     | integrin binding sialoprotein                 | PanCancer Progression |
| ICAM1    | intercellular adhesion molecule 1             | PanCancer Progression |
| ID1      | inhibitor of DNA binding 1, HLH protein       | PanCancer Progression |
| ID2      | inhibitor of DNA binding 2                    | PanCancer Progression |
| ID4      | inhibitor of DNA binding 4, HLH protein       | PanCancer Progression |
| IFNG     | interferon gamma                              | PanCancer Progression |
| IGF1     | insulin like growth factor 1                  | PanCancer Progression |
| IGFBP4   | insulin like growth factor binding protein 4  | PanCancer Progression |
| IGFBP7   | insulin like growth factor binding protein 7  | PanCancer Progression |
| IL10RA   | interleukin 10 receptor subunit alpha         | PanCancer Progression |
| IL11     | interleukin 11                                | PanCancer Progression |
| IL13RA2  | interleukin 13 receptor subunit alpha 2       | PanCancer Progression |
| IL15     | interleukin 15                                | PanCancer Progression |

|        |   |                       |
|--------|---|-----------------------|
| IL18   | interleukin 18  | PanCancer Progression |
| IL1A   | interleukin 1 alpha                                       | PanCancer Progression |
| IL1B   | interleukin 1 beta  | PanCancer Progression |
| IL1RL1 | interleukin 1 receptor like 1                             | PanCancer Progression |
| IL1RN  | interleukin 1 receptor antagonist                         | PanCancer Progression |
| IL6    | interleukin 6   | PanCancer Progression |
| ILK    | integrin linked kinase                                    | PanCancer Progression |
| INHBA  | inhibin beta A subunit                                    | PanCancer Progression |
| INHBE  | inhibin beta E subunit                                    | PanCancer Progression |
| IRF6   | interferon regulatory factor 6                            | PanCancer Progression |
| ISL1   | ISL LIM homeobox 1  | PanCancer Progression |
| ISLR   | immunoglobulin superfamily containing leucine rich repeat | PanCancer Progression |
| ITGA1  | integrin subunit alpha 1                                  | PanCancer Progression |
| ITGA11 | integrin subunit alpha 11                                 | PanCancer Progression |
| ITGA2  | integrin subunit alpha 2                                  | PanCancer Progression |
| ITGA3  | integrin subunit alpha 3                                  | PanCancer Progression |
| ITGA5  | integrin subunit alpha 5                                  | PanCancer Progression |
| ITGA6  | integrin subunit alpha 6                                  | PanCancer Progression |
| ITGA7  | integrin subunit alpha 7                                  | PanCancer Progression |
| ITGA8  | integrin subunit alpha 8                                  | PanCancer Progression |
| ITGA9  | integrin subunit alpha 9                                  | PanCancer Progression |
| ITGAM  | integrin subunit alpha M                                  | PanCancer Progression |
| ITGB1  | integrin subunit beta 1                                   | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| ITGB1BP1 | integrin subunit beta 1 binding protein 1             | PanCancer Progression |
| ITGB2    | integrin subunit beta 2                               | PanCancer Progression |
| ITGB3    | integrin subunit beta 3                               | PanCancer Progression |
| ITGB4    | integrin subunit beta 4                               | PanCancer Progression |
| ITGB6    | integrin subunit beta 6                               | PanCancer Progression |
| ITGB7    | integrin subunit beta 7                               | PanCancer Progression |
| ITGB8    | integrin subunit beta 8                               | PanCancer Progression |
| ITM2A    | integral membrane protein 2A                          | PanCancer Progression |
| JAG1     | jagged 1  | PanCancer Progression |
| JAM2     | junctional adhesion molecule 2                        | PanCancer Progression |
| JAM3     | junctional adhesion molecule 3                        | PanCancer Progression |
| JUN      | Jun proto-oncogene, AP-1 transcription factor subunit | PanCancer Progression |
| KCNJ8    | potassium voltage-gated channel subfamily J member 8  | PanCancer Progression |
| KDM1A    | lysine demethylase 1A                                 | PanCancer Progression |
| KDR      | kinase insert domain receptor                         | PanCancer Progression |
| KIAA1462 | junctional cadherin 5 associated                      | PanCancer Progression |
| KISS1    | KiSS-1 metastasis suppressor                          | PanCancer Progression |
| KLK3     | kallikrein related peptidase 3                        | PanCancer Progression |
| KRAS     | KRAS proto-oncogene, GTPase                           | PanCancer Progression |
| KRIT1    | KRIT1, ankyrin repeat containing                      | PanCancer Progression |
| KRT1     | keratin 1   | PanCancer Progression |
| KRT14    | keratin 14  | PanCancer Progression |
| KRT19    | keratin 19  | PanCancer Progression |

|        |  |                       |
|--------|--|-----------------------|
| KRT7   | keratin 7  | PanCancer Progression |
| LAD1   | ladinin 1  | PanCancer Progression |
| LAMA1  | laminin subunit alpha 1                                  | PanCancer Progression |
| LAMA3  | laminin subunit alpha 3                                  | PanCancer Progression |
| LAMA4  | laminin subunit alpha 4                                  | PanCancer Progression |
| LAMA5  | laminin subunit alpha 5                                  | PanCancer Progression |
| LAMB3  | laminin subunit beta 3                                   | PanCancer Progression |
| LAMC1  | laminin subunit gamma 1                                  | PanCancer Progression |
| LAMC2  | laminin subunit gamma 2                                  | PanCancer Progression |
| LDHA   | lactate dehydrogenase A                                  | PanCancer Progression |
| LEFTY1 | left-right determination factor 1                        | PanCancer Progression |
| LGALS1 | galectin 1   | PanCancer Progression |
| LHFP   | LHFPL tetraspan subfamily member 6                       | PanCancer Progression |
| LIFR   | LIF receptor alpha                                       | PanCancer Progression |
| LLGL2  | LLGL2, scribble cell polarity complex component          | PanCancer Progression |
| LOX    | lysyl oxidase  | PanCancer Progression |
| LOXL2  | lysyl oxidase like 2                                     | PanCancer Progression |
| LRG1   | leucine rich alpha-2-glycoprotein 1                      | PanCancer Progression |
| LTBP4  | latent transforming growth factor beta binding protein 4 | PanCancer Progression |
| LUM    | lumican  | PanCancer Progression |
| LY96   | lymphocyte antigen 96                                    | PanCancer Progression |
| MAF    | MAF bZIP transcription factor                            | PanCancer Progression |
| MAP2K1 | mitogen-activated protein kinase kinase 1                | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| MAP2K2   | mitogen-activated protein kinase kinase 2                                   | PanCancer Progression |
| MAP2K4   | mitogen-activated protein kinase kinase 4                                   | PanCancer Progression |
| MAP3K7   | mitogen-activated protein kinase kinase kinase 7                            | PanCancer Progression |
| MAPK1    | mitogen-activated protein kinase 1  | PanCancer Progression |
| MAPK3    | mitogen-activated protein kinase 3  | PanCancer Progression |
| MAPKAPK3 | mitogen-activated protein kinase-activated protein kinase 3                 | PanCancer Progression |
| MCAM     | melanoma cell adhesion molecule   | PanCancer Progression |
| MED1     | mediator complex subunit 1  | PanCancer Progression |
| MED23    | mediator complex subunit 23   | PanCancer Progression |
| MEG3     | maternally expressed 3 (non-protein coding)                                 | PanCancer Progression |
| MEOX2    | mesenchyme homeobox 2   | PanCancer Progression |
| MET      | MET proto-oncogene, receptor tyrosine kinase                                | PanCancer Progression |
| MFAP4    | microfibril associated protein 4  | PanCancer Progression |
| MGAT5    | mannosyl (alpha-1,6-)-glycoprotein beta-1,6-N-acetylglucosaminyltransferase | PanCancer Progression |
| MGP      | matrix Gla protein  | PanCancer Progression |
| MISP     | mitotic spindle positioning   | PanCancer Progression |
| MMP1     | matrix metalloproteinase 1  | PanCancer Progression |
| MMP10    | matrix metalloproteinase 10   | PanCancer Progression |
| MMP12    | matrix metalloproteinase 12   | PanCancer Progression |
| MMP13    | matrix metalloproteinase 13   | PanCancer Progression |
| MMP14    | matrix metalloproteinase 14   | PanCancer Progression |
| MMP17    | matrix metalloproteinase 17   | PanCancer Progression |
| MMP2     | matrix metalloproteinase 2  | PanCancer Progression |

|        |  |                       |
|--------|--|-----------------------|
| MMP24  | matrix metalloproteinase 24                                | PanCancer Progression |
| MMP3   | matrix metalloproteinase 3                                 | PanCancer Progression |
| MMP9   | matrix metalloproteinase 9                                 | PanCancer Progression |
| MMRN2  | multimerin 2   | PanCancer Progression |
| MPDZ   | multiple PDZ domain crumbs cell polarity complex component | PanCancer Progression |
| MRC1   | mannose receptor C-type 1                                  | PanCancer Progression |
| MS4A4A | membrane spanning 4-domains A4A                            | PanCancer Progression |
| MS4A6A | membrane spanning 4-domains A6A                            | PanCancer Progression |
| MT3    | metallothionein 3  | PanCancer Progression |
| MTA1   | metastasis associated 1                                    | PanCancer Progression |
| MTBP   | MDM2 binding protein                                       | PanCancer Progression |
| MTDH   | metadherin   | PanCancer Progression |
| MTOR   | mechanistic target of rapamycin kinase                     | PanCancer Progression |
| MUC1   | mucin 1, cell surface associated                           | PanCancer Progression |
| MYC    | MYC proto-oncogene, bHLH transcription factor              | PanCancer Progression |
| MYCL   | MYCL proto-oncogene, bHLH transcription factor             | PanCancer Progression |
| MYH11  | myosin heavy chain 11                                      | PanCancer Progression |
| MYLK   | myosin light chain kinase                                  | PanCancer Progression |
| MYO1D  | myosin ID  | PanCancer Progression |
| MYO5C  | myosin VC  | PanCancer Progression |
| NAA15  | N(alpha)-acetyltransferase 15, NatA auxiliary subunit      | PanCancer Progression |
| NAP1L3 | nucleosome assembly protein 1 like 3                       | PanCancer Progression |
| NCAM1  | neural cell adhesion molecule 1                            | PanCancer Progression |



|        |   |                       |
|--------|---|-----------------------|
| NCL    | nucleolin                                     | PanCancer Progression |
| NDNF   | neuron derived neurotrophic factor            | PanCancer Progression |
| NDP    | NDP, norrin cystine knot growth factor        | PanCancer Progression |
| NDRG1  | N-myc downstream regulated 1                  | PanCancer Progression |
| NF1    | neurofibromin 1                               | PanCancer Progression |
| NF2    | neurofibromin 2                               | PanCancer Progression |
| NFAT5  | nuclear factor of activated T cells 5         | PanCancer Progression |
| NFATC2 | nuclear factor of activated T cells 2         | PanCancer Progression |
| NFKB1  | nuclear factor kappa B subunit 1              | PanCancer Progression |
| NID2   | nidogen 2                                     | PanCancer Progression |
| NME1   | NME/NM23 nucleoside diphosphate kinase 1      | PanCancer Progression |
| NME4   | NME/NM23 nucleoside diphosphate kinase 4      | PanCancer Progression |
| NODAL  | nodal growth differentiation factor           | PanCancer Progression |
| NOS2   | nitric oxide synthase 2                       | PanCancer Progression |
| NOS3   | nitric oxide synthase 3                       | PanCancer Progression |
| NOTCH1 | notch 1                                       | PanCancer Progression |
| NOX5   | NADPH oxidase 5                               | PanCancer Progression |
| NPR1   | natriuretic peptide receptor 1                | PanCancer Progression |
| NR3C1  | nuclear receptor subfamily 3 group C member 1 | PanCancer Progression |
| NR4A1  | nuclear receptor subfamily 4 group A member 1 | PanCancer Progression |
| NR4A3  | nuclear receptor subfamily 4 group A member 3 | PanCancer Progression |
| NRCAM  | neuronal cell adhesion molecule               | PanCancer Progression |
| NRP1   | neuropilin 1                                  | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| NRP2    | neuropilin 2  | PanCancer Progression |
| NRXN1   | neurexin 1  | PanCancer Progression |
| NRXN3   | neurexin 3  | PanCancer Progression |
| NTRK1   | neurotrophic receptor tyrosine kinase 1               | PanCancer Progression |
| OAS1    | 2'-5'-oligoadenylate synthetase 1                     | PanCancer Progression |
| OCLN    | occludin  | PanCancer Progression |
| OGN     | osteoglycin   | PanCancer Progression |
| OLFML2B | olfactomedin like 2B                                  | PanCancer Progression |
| OVOL2   | ovo like zinc finger 2                                | PanCancer Progression |
| P3H1    | prolyl 3-hydroxylase 1                                | PanCancer Progression |
| P3H2    | prolyl 3-hydroxylase 2                                | PanCancer Progression |
| PCOLCE  | procollagen C-endopeptidase enhancer                  | PanCancer Progression |
| PDCD10  | programmed cell death 10                              | PanCancer Progression |
| PDCL3   | phosducin like 3                                      | PanCancer Progression |
| PDGFA   | platelet derived growth factor subunit A              | PanCancer Progression |
| PDGFC   | platelet derived growth factor C                      | PanCancer Progression |
| PDGFRB  | platelet derived growth factor receptor beta          | PanCancer Progression |
| PK1     | pyruvate dehydrogenase kinase 1                       | PanCancer Progression |
| PDPN    | podoplanin  | PanCancer Progression |
| PEBP4   | phosphatidylethanolamine binding protein 4            | PanCancer Progression |
| PECAM1  | platelet and endothelial cell adhesion molecule 1     | PanCancer Progression |
| PFKFB1  | 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 1 | PanCancer Progression |
| PFKFB4  | 6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 4 | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| PGK1    | phosphoglycerate kinase 1  | PanCancer Progression |
| PIK3CA  | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha | PanCancer Progression |
| PIK3CD  | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta | PanCancer Progression |
| PIK3CG  | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma | PanCancer Progression |
| PIK3R1  | phosphoinositide-3-kinase regulatory subunit 1                         | PanCancer Progression |
| PIK3R2  | phosphoinositide-3-kinase regulatory subunit 2                         | PanCancer Progression |
| PIK3R5  | phosphoinositide-3-kinase regulatory subunit 5                         | PanCancer Progression |
| PIK3R6  | phosphoinositide-3-kinase regulatory subunit 6                         | PanCancer Progression |
| PITX2   | paired like homeodomain 2  | PanCancer Progression |
| PKM     | pyruvate kinase M1/2   | PanCancer Progression |
| PKN1    | protein kinase N1  | PanCancer Progression |
| PKNOX1  | PBX/knotted 1 homeobox 1   | PanCancer Progression |
| PLA2G10 | phospholipase A2 group X   | PanCancer Progression |
| PLA2G2A | phospholipase A2 group IIA   | PanCancer Progression |
| PLA2G2D | phospholipase A2 group IID   | PanCancer Progression |
| PLA2G3  | phospholipase A2 group III   | PanCancer Progression |
| PLAU    | plasminogen activator, urokinase                                       | PanCancer Progression |
| PLAUR   | plasminogen activator, urokinase receptor                              | PanCancer Progression |
| PLCG1   | phospholipase C gamma 1  | PanCancer Progression |
| PLCG2   | phospholipase C gamma 2  | PanCancer Progression |
| PLEKHO1 | pleckstrin homology domain containing O1                               | PanCancer Progression |
| PLS1    | plastin 1  | PanCancer Progression |
| PLXDC1  | plexin domain containing 1   | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| PLXNC1   | plexin C1   | PanCancer Progression |
| PLXND1   | plexin D1   | PanCancer Progression |
| PMP22    | peripheral myelin protein 22                              | PanCancer Progression |
| PNPLA6   | patatin like phospholipase domain containing 6            | PanCancer Progression |
| POPDC3   | popeye domain containing 3                                | PanCancer Progression |
| POSTN    | periostin   | PanCancer Progression |
| PPFIBP2  | PPFIA binding protein 2                                   | PanCancer Progression |
| PPL      | periplakin  | PanCancer Progression |
| PPP1R16B | protein phosphatase 1 regulatory subunit 16B              | PanCancer Progression |
| PPP2CB   | protein phosphatase 2 catalytic subunit beta              | PanCancer Progression |
| PPP2R1A  | protein phosphatase 2 scaffold subunit Aalpha             | PanCancer Progression |
| PPP3R1   | protein phosphatase 3 regulatory subunit B, alpha         | PanCancer Progression |
| PRELP    | proline and arginine rich end leucine rich repeat protein | PanCancer Progression |
| PRF1     | perforin 1  | PanCancer Progression |
| PRKCB    | protein kinase C beta                                     | PanCancer Progression |
| PRKCG    | protein kinase C gamma                                    | PanCancer Progression |
| PRKCZ    | protein kinase C zeta                                     | PanCancer Progression |
| PROK2    | prokineticin 2  | PanCancer Progression |
| PROM1    | prominin 1  | PanCancer Progression |
| PRR15L   | proline rich 15 like                                      | PanCancer Progression |
| PRSS22   | protease, serine 22                                       | PanCancer Progression |
| PRSS8    | protease, serine 8  | PanCancer Progression |
| PTEN     | phosphatase and tensin homolog                            | PanCancer Progression |

|        |   |                       |
|--------|---|-----------------------|
| PTGDS  | prostaglandin D2 synthase                     | PanCancer Progression |
| PTGIS  | prostaglandin I2 synthase                     | PanCancer Progression |
| PTGS2  | prostaglandin-endoperoxide synthase 2         | PanCancer Progression |
| PTK2   | protein tyrosine kinase 2                     | PanCancer Progression |
| PTK2B  | protein tyrosine kinase 2 beta                | PanCancer Progression |
| PTK6   | protein tyrosine kinase 6                     | PanCancer Progression |
| PTPRB  | protein tyrosine phosphatase, receptor type B | PanCancer Progression |
| PTPRC  | protein tyrosine phosphatase, receptor type C | PanCancer Progression |
| PTPRM  | protein tyrosine phosphatase, receptor type M | PanCancer Progression |
| PTRF   | caveolae associated protein 1                 | PanCancer Progression |
| PTTG1  | pituitary tumor-transforming 1                | PanCancer Progression |
| PTX3   | pentraxin 3                                   | PanCancer Progression |
| PXDN   | peroxidasin                                   | PanCancer Progression |
| PYCARD | PYD and CARD domain containing                | PanCancer Progression |
| QKI    | QKI, KH domain containing RNA binding         | PanCancer Progression |
| RAB25  | RAB25, member RAS oncogene family             | PanCancer Progression |
| RAC1   | Rac family small GTPase 1                     | PanCancer Progression |
| RAC2   | Rac family small GTPase 2                     | PanCancer Progression |
| RAF1   | Raf-1 proto-oncogene, serine/threonine kinase | PanCancer Progression |
| RAMP1  | receptor activity modifying protein 1         | PanCancer Progression |
| RAMP2  | receptor activity modifying protein 2         | PanCancer Progression |
| RB1    | RB transcriptional corepressor 1              | PanCancer Progression |
| RBL1   | RB transcriptional corepressor like 1         | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| RBL2    | RB transcriptional corepressor like 2                                  | PanCancer Progression |
| RBM47   | RNA binding motif protein 47   | PanCancer Progression |
| RBPJ    | recombination signal binding protein for immunoglobulin kappa J region | PanCancer Progression |
| RBX1    | ring-box 1   | PanCancer Progression |
| RELN    | reelin   | PanCancer Progression |
| RGCC    | regulator of cell cycle  | PanCancer Progression |
| RHOA    | ras homolog family member A  | PanCancer Progression |
| RNH1    | ribonuclease/angiogenin inhibitor 1                                    | PanCancer Progression |
| ROBO4   | roundabout guidance receptor 4   | PanCancer Progression |
| ROCK1   | Rho associated coiled-coil containing protein kinase 1                 | PanCancer Progression |
| ROCK2   | Rho associated coiled-coil containing protein kinase 2                 | PanCancer Progression |
| RORA    | RAR related orphan receptor A  | PanCancer Progression |
| RORB    | RAR related orphan receptor B  | PanCancer Progression |
| RPS27A  | ribosomal protein S27a   | PanCancer Progression |
| RPS6KB1 | ribosomal protein S6 kinase B1   | PanCancer Progression |
| RPS6KB2 | ribosomal protein S6 kinase B2   | PanCancer Progression |
| RRAS    | RAS related  | PanCancer Progression |
| RTN4    | reticulon 4  | PanCancer Progression |
| RUNX1   | runt related transcription factor 1                                    | PanCancer Progression |
| RUNX1T1 | RUNX1 translocation partner 1  | PanCancer Progression |
| S100A14 | S100 calcium binding protein A14                                       | PanCancer Progression |
| S100A7  | S100 calcium binding protein A7  | PanCancer Progression |
| S1PR1   | sphingosine-1-phosphate receptor 1                                     | PanCancer Progression |

|          |   |                       |
|----------|---|-----------------------|
| SACS     | sacsin molecular chaperone                                | PanCancer Progression |
| SAMSN1   | SAM domain, SH3 domain and nuclear localization signals 1 | PanCancer Progression |
| SCG2     | secretogranin II  | PanCancer Progression |
| SCNN1A   | sodium channel epithelial 1 alpha subunit                 | PanCancer Progression |
| SDC4     | syndecan 4  | PanCancer Progression |
| SELE     | selectin E  | PanCancer Progression |
| SEMA3E   | semaphorin 3E   | PanCancer Progression |
| SERINC5  | serine incorporator 5                                     | PanCancer Progression |
| SERPINA1 | serpin family A member 1                                  | PanCancer Progression |
| SERPINE1 | serpin family E member 1                                  | PanCancer Progression |
| SERPINF1 | serpin family F member 1                                  | PanCancer Progression |
| SERPING1 | serpin family G member 1                                  | PanCancer Progression |
| SERPINH1 | serpin family H member 1                                  | PanCancer Progression |
| SET      | SET nuclear proto-oncogene                                | PanCancer Progression |
| SETD2    | SET domain containing 2                                   | PanCancer Progression |
| SFRP1    | secreted frizzled related protein 1                       | PanCancer Progression |
| SFRP2    | secreted frizzled related protein 2                       | PanCancer Progression |
| SH2B3    | SH2B adaptor protein 3                                    | PanCancer Progression |
| SH2D3A   | SH2 domain containing 3A                                  | PanCancer Progression |
| SH3YL1   | SH3 and SYLF domain containing 1                          | PanCancer Progression |
| SHB      | SH2 domain containing adaptor protein B                   | PanCancer Progression |
| SIRT1    | sirtuin 1   | PanCancer Progression |
| SKP1     | S-phase kinase associated protein 1                       | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| SLC12A6 | solute carrier family 12 member 6             | PanCancer Progression |
| SLC2A1  | solute carrier family 2 member 1              | PanCancer Progression |
| SLC35A3 | solute carrier family 35 member A3            | PanCancer Progression |
| SLC37A1 | solute carrier family 37 member 1             | PanCancer Progression |
| SLC44A4 | solute carrier family 44 member 4             | PanCancer Progression |
| SLIT2   | slit guidance ligand 2                        | PanCancer Progression |
| SLPI    | secretory leukocyte peptidase inhibitor       | PanCancer Progression |
| SMAD1   | SMAD family member 1                          | PanCancer Progression |
| SMAD2   | SMAD family member 2                          | PanCancer Progression |
| SMAD3   | SMAD family member 3                          | PanCancer Progression |
| SMAD4   | SMAD family member 4                          | PanCancer Progression |
| SMAD5   | SMAD family member 5                          | PanCancer Progression |
| SMAD9   | SMAD family member 9                          | PanCancer Progression |
| SMC3    | structural maintenance of chromosomes 3       | PanCancer Progression |
| SMOC1   | SPARC related modular calcium binding 1       | PanCancer Progression |
| SMURF1  | SMAD specific E3 ubiquitin protein ligase 1   | PanCancer Progression |
| SMURF2  | SMAD specific E3 ubiquitin protein ligase 2   | PanCancer Progression |
| SNAI1   | snail family transcriptional repressor 1      | PanCancer Progression |
| SNAI2   | snail family transcriptional repressor 2      | PanCancer Progression |
| SNAI3   | snail family transcriptional repressor 3      | PanCancer Progression |
| SNRPF   | small nuclear ribonucleoprotein polypeptide F | PanCancer Progression |
| SOD1    | superoxide dismutase 1                        | PanCancer Progression |
| SORD    | sorbitol dehydrogenase                        | PanCancer Progression |



|         |   |                       |
|---------|---|-----------------------|
| SOX17   | SRY-box 17  | PanCancer Progression |
| SOX2    | SRY-box 2   | PanCancer Progression |
| SOX9    | SRY-box 9   | PanCancer Progression |
| SP1     | Sp1 transcription factor                                      | PanCancer Progression |
| SPARC   | secreted protein acidic and cysteine rich                     | PanCancer Progression |
| SPARCL1 | SPARC like 1  | PanCancer Progression |
| SPDEF   | SAM pointed domain containing ETS transcription factor        | PanCancer Progression |
| SPHK2   | sphingosine kinase 2  | PanCancer Progression |
| SPINK5  | serine peptidase inhibitor, Kazal type 5                      | PanCancer Progression |
| SPINT1  | serine peptidase inhibitor, Kunitz type 1                     | PanCancer Progression |
| SPOCK3  | SPARC/osteonectin, cwcv and kazal like domains proteoglycan 3 | PanCancer Progression |
| SPP1    | secreted phosphoprotein 1                                     | PanCancer Progression |
| SRC     | SRC proto-oncogene, non-receptor tyrosine kinase              | PanCancer Progression |
| SRF     | serum response factor   | PanCancer Progression |
| SRGN    | serglycin   | PanCancer Progression |
| SRPK2   | SRSF protein kinase 2   | PanCancer Progression |
| SRPX2   | sushi repeat containing protein, X-linked 2                   | PanCancer Progression |
| SSTR2   | somatostatin receptor 2                                       | PanCancer Progression |
| ST14    | suppression of tumorigenicity 14                              | PanCancer Progression |
| STAB1   | stabilin 1  | PanCancer Progression |
| STAB2   | stabilin 2  | PanCancer Progression |
| STAT1   | signal transducer and activator of transcription 1            | PanCancer Progression |
| STAT3   | signal transducer and activator of transcription 3            | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| SULF1   | sulfatase 1   | PanCancer Progression |
| SV2B    | synaptic vesicle glycoprotein 2B                                  | PanCancer Progression |
| SYK     | spleen associated tyrosine kinase                                 | PanCancer Progression |
| SYNE1   | spectrin repeat containing nuclear envelope protein 1             | PanCancer Progression |
| TACSTD2 | tumor associated calcium signal transducer 2                      | PanCancer Progression |
| TAL1    | TAL bHLH transcription factor 1, erythroid differentiation factor | PanCancer Progression |
| TBX1    | T-box 1   | PanCancer Progression |
| TBX4    | T-box 4   | PanCancer Progression |
| TBXA2R  | thromboxane A2 receptor   | PanCancer Progression |
| TCEB1   | elongin C   | PanCancer Progression |
| TCEB2   | elongin B   | PanCancer Progression |
| TCF20   | transcription factor 20   | PanCancer Progression |
| TCF3    | transcription factor 3  | PanCancer Progression |
| TCF4    | transcription factor 4  | PanCancer Progression |
| TDGF1   | teratocarcinoma-derived growth factor 1                           | PanCancer Progression |
| TEK     | TEK receptor tyrosine kinase                                      | PanCancer Progression |
| TF      | transferrin   | PanCancer Progression |
| TFDP1   | transcription factor Dp-1   | PanCancer Progression |
| TFPI2   | tissue factor pathway inhibitor 2                                 | PanCancer Progression |
| TGFB1   | transforming growth factor beta 1                                 | PanCancer Progression |
| TGFB2   | transforming growth factor beta 2                                 | PanCancer Progression |
| TGFBI   | transforming growth factor beta induced                           | PanCancer Progression |
| TGFBR2  | transforming growth factor beta receptor 2                        | PanCancer Progression |

|           |   |                       |
|-----------|---|-----------------------|
| THBS1     | thrombospondin 1  | PanCancer Progression |
| THBS2     | thrombospondin 2  | PanCancer Progression |
| THBS4     | thrombospondin 4  | PanCancer Progression |
| THY1      | Thy-1 cell surface antigen                                      | PanCancer Progression |
| TIE1      | tyrosine kinase with immunoglobulin like and EGF like domains 1 | PanCancer Progression |
| TIMP1     | TIMP metalloproteinase inhibitor 1                              | PanCancer Progression |
| TIMP2     | TIMP metalloproteinase inhibitor 2                              | PanCancer Progression |
| TIMP4     | TIMP metalloproteinase inhibitor 4                              | PanCancer Progression |
| TJP2      | tight junction protein 2  | PanCancer Progression |
| TJP3      | tight junction protein 3  | PanCancer Progression |
| TLR4      | toll like receptor 4  | PanCancer Progression |
| TMC6      | transmembrane channel like 6                                    | PanCancer Progression |
| TMEM100   | transmembrane protein 100                                       | PanCancer Progression |
| TMEM30B   | transmembrane protein 30B                                       | PanCancer Progression |
| TMPRSS2   | transmembrane protease, serine 2                                | PanCancer Progression |
| TMPRSS4   | transmembrane protease, serine 4                                | PanCancer Progression |
| TMPRSS6   | transmembrane protease, serine 6                                | PanCancer Progression |
| TNC       | tenascin C  | PanCancer Progression |
| TNF       | tumor necrosis factor   | PanCancer Progression |
| TNFRSF12A | TNF receptor superfamily member 12A                             | PanCancer Progression |
| TNFRSF1A  | TNF receptor superfamily member 1A                              | PanCancer Progression |
| TNFSF10   | TNF superfamily member 10                                       | PanCancer Progression |
| TNFSF12   | TNF superfamily member 12                                       | PanCancer Progression |

|         |   |                       |
|---------|---|-----------------------|
| TNFSF13 | TNF superfamily member 13                                 | PanCancer Progression |
| TNMD    | tenomodulin   | PanCancer Progression |
| TNN     | tenascin N  | PanCancer Progression |
| TNS1    | tensin 1  | PanCancer Progression |
| TNXB    | tenascin XB   | PanCancer Progression |
| TOM1L1  | target of myb1 like 1 membrane trafficking protein        | PanCancer Progression |
| TP53    | tumor protein p53   | PanCancer Progression |
| TPM2    | tropomyosin 2   | PanCancer Progression |
| TPSB2   | tryptase beta 2 (gene/pseudogene)                         | PanCancer Progression |
| TPSD1   | tryptase delta 1  | PanCancer Progression |
| TSHR    | thyroid stimulating hormone receptor                      | PanCancer Progression |
| TSPAN1  | tetraspanin 1   | PanCancer Progression |
| TWIST1  | twist family bHLH transcription factor 1                  | PanCancer Progression |
| TWIST2  | twist family bHLH transcription factor 2                  | PanCancer Progression |
| TXNIP   | thioredoxin interacting protein                           | PanCancer Progression |
| TYMP    | thymidine phosphorylase                                   | PanCancer Progression |
| UBA52   | ubiquitin A-52 residue ribosomal protein fusion product 1 | PanCancer Progression |
| UTS2    | urotensin 2   | PanCancer Progression |
| VAMP8   | vesicle associated membrane protein 8                     | PanCancer Progression |
| VASH1   | vasohibin 1   | PanCancer Progression |
| VAV2    | vav guanine nucleotide exchange factor 2                  | PanCancer Progression |
| VAV3    | vav guanine nucleotide exchange factor 3                  | PanCancer Progression |
| VCAM1   | vascular cell adhesion molecule 1                         | PanCancer Progression |

|         |  |                       |
|---------|--|-----------------------|
| VCAN    | versican                                       | PanCancer Progression |
| VEGFA   | vascular endothelial growth factor A           | PanCancer Progression |
| VEGFB   | vascular endothelial growth factor B           | PanCancer Progression |
| VEGFC   | vascular endothelial growth factor C           | PanCancer Progression |
| VEZF1   | vascular endothelial zinc finger 1             | PanCancer Progression |
| VHL     | von Hippel-Lindau tumor suppressor             | PanCancer Progression |
| VIM     | vimentin                                       | PanCancer Progression |
| VIT     | vitrin   | PanCancer Progression |
| VPS13A  | vacuolar protein sorting 13 homolog A          | PanCancer Progression |
| VSIG4   | V-set and immunoglobulin domain containing 4   | PanCancer Progression |
| VWA1    | von Willebrand factor A domain containing 1    | PanCancer Progression |
| VWA2    | von Willebrand factor A domain containing 2    | PanCancer Progression |
| WARS    | tryptophanyl-tRNA synthetase                   | PanCancer Progression |
| WIPF1   | WAS/WASL interacting protein family member 1   | PanCancer Progression |
| WNT5A   | Wnt family member 5A                           | PanCancer Progression |
| WNT5B   | Wnt family member 5B                           | PanCancer Progression |
| WWTR1   | WW domain containing transcription regulator 1 | PanCancer Progression |
| ZC3H12A | zinc finger CCCH-type containing 12A           | PanCancer Progression |
| ZCCHC24 | zinc finger CCHC-type containing 24            | PanCancer Progression |
| ZEB1    | zinc finger E-box binding homeobox 1           | PanCancer Progression |
| ZEB2    | zinc finger E-box binding homeobox 2           | PanCancer Progression |
| ZFPM2   | zinc finger protein, FOG family member 2       | PanCancer Progression |
| ZFYVE16 | zinc finger FYVE-type containing 16            | PanCancer Progression |

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| ZFYVE9   | zinc finger FYVE-type containing 9                          | PanCancer Progression |
| AGK      | acylglycerol kinase   | PanCancer Progression |
| AMMECR1L | AMMECR1 like  | PanCancer Progression |
| CC2D1B   | coiled-coil and C2 domain containing 1B                     | PanCancer Progression |
| CNOT10   | CCR4-NOT transcription complex subunit 10                   | PanCancer Progression |
| CNOT4    | CCR4-NOT transcription complex subunit 4                    | PanCancer Progression |
| COG7     | component of oligomeric golgi complex 7                     | PanCancer Progression |
| DDX50    | DEaD-box helicase 50  | PanCancer Progression |
| DHX16    | DEAH-box helicase 16  | PanCancer Progression |
| DNAJC14  | DnaJ heat shock protein family (Hsp40) member C14           | PanCancer Progression |
| EDC3     | enhancer of mRNA decapping 3                                | PanCancer Progression |
| EIF2B4   | eukaryotic translation initiation factor 2B subunit delta   | PanCancer Progression |
| ERCC3    | ERCC excision repair 3, TFIIH core complex helicase subunit | PanCancer Progression |
| FCF1     | FCF1, rRNA-processing protein                               | PanCancer Progression |
| GPATCH3  | G-patch domain containing 3                                 | PanCancer Progression |
| HDAC3    | histone deacetylase 3                                       | PanCancer Progression |
| MRPS5    | mitochondrial ribosomal protein S5                          | PanCancer Progression |
| MTMR14   | myotubularin related protein 14                             | PanCancer Progression |
| NOL7     | nucleolar protein 7   | PanCancer Progression |
| NUBP1    | nucleotide binding protein 1                                | PanCancer Progression |
| PRPF38A  | pre-mRNA processing factor 38A                              | PanCancer Progression |
| SAP130   | Sin3A associated protein 130                                | PanCancer Progression |
| SF3A3    | splicing factor 3a subunit 3                                | PanCancer Progression |

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| TLK2     | tousled like kinase 2   | PanCancer Progression |
| TMUB2    | transmembrane and ubiquitin like domain containing 2  | PanCancer Progression |
| TRIM39   | tripartite motif containing 39  | PanCancer Progression |
| USP39    | ubiquitin specific peptidase 39   | PanCancer Progression |
| ZC3H14   | zinc finger CCCH-type containing 14   | PanCancer Progression |
| ZKSCAN5  | zinc finger with KRAB and SCAN domains 5  | PanCancer Progression |
| ZNF143   | zinc finger protein 143   | PanCancer Progression |
| ZNF346   | zinc finger protein 346   | PanCancer Progression |
| ACACA    | acetyl-Coenzyme A carboxylase alpha   | Custom Content        |
| ALOX5AP  | arachidonate 5-lipoxygenase-activating protein  | Custom Content        |
| AQP9     | aquaporin 9   | Custom Content        |
| ART1     | ADP-ribosyltransferase 1  | Custom Content        |
| BCAT1    | branched chain amino-acid transaminase 1, cytosolic   | Custom Content        |
| CD300A   | CD300a molecule   | Custom Content        |
| CERS6    | ceramide synthase 6   | Custom Content        |
| CPT1A    | carnitine palmitoyltransferase 1A (liver)   | Custom Content        |
| CTNNBIP1 | catenin, beta interacting protein 1   | Custom Content        |
| EIF2AK4  | eukaryotic translation initiation factor 2 alpha kinase 4                                       | Custom Content        |
| FAM129A  | family with sequence similarity 129, member A   | Custom Content        |
| FOXO3    | forkhead box O3   | Custom Content        |
| FOXP1    | forkhead box P1   | Custom Content        |
| HK1      | hexokinase 1  | Custom Content        |
| HMGB3    | high mobility group box 3   | Custom Content        |
| HMGCR    | 3-hydroxy-3-methylglutaryl-Coenzyme A reductase   | Custom Content        |
| HNRNPLL  | heterogeneous nuclear ribonucleoprotein L-like  | Custom Content        |
| MTHFD1   | methylenetetrahydrofolate dehydrogenase, cyclohydrolase and formyltetrahydrofolate synthetase 1 | Custom Content        |
| P2RX7    | purinergic receptor P2X, ligand-gated ion channel, 7  | Custom Content        |
| PDE3B    | phosphodiesterase 3B, cGMP-inhibited  | Custom Content        |
| PNPLA2   | patatin-like phospholipase domain containing 2  | Custom Content        |
| PRR5L    | proline rich 5 like   | Custom Content        |
| SLC3A2   | solute carrier family 3 (activators of dibasic and neutral amino acid transport), member 2      | Custom Content        |
| SREBF1   | sterol regulatory element binding transcription factor 1  | Custom Content        |
| SREBF2   | sterol regulatory element binding transcription factor 2  | Custom Content        |
| TDH      | L-threonine dehydrogenase   | Custom Content        |

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| TIMD4    | T-cell immunoglobulin and mucin domain containing 4  | Custom Content |
| TOX      | thymus high mobility group box protein TOX   | Custom Content |
| TPP2     | tripeptidyl peptidase 2  | Custom Content |
| WNT3A    | wingless-type MMTV integration site family, member 3A  | Custom Content |
| ASS1     | argininosuccinate synthetase 1   | Custom Content |
| CEACAM3  | carcinoembryonic antigen-related cell adhesion molecule 3  | Custom Content |
| CPA3     | carboxypeptidase A3  | Custom Content |
| ERCC5    | excision repair cross-complementing rodent repair deficiency, complementation group 5                            | Custom Content |
| EXO1     | exonuclease 1  | Custom Content |
| FCAR     | Fc fragment of IgA, receptor for   | Custom Content |
| FCGR3B   | Fc fragment of IgG, low affinity IIIb, receptor (CD16b)  | Custom Content |
| FCRL2    | Fc receptor-like 2   | Custom Content |
| FPR1     | formyl peptide receptor 1  | Custom Content |
| GLS      | glutaminase  | Custom Content |
| GLUL     | glutamate-ammonia ligase   | Custom Content |
| HAT1     | histone acetyltransferase 1  | Custom Content |
| KAT5     | K(lysine) acetyltransferase 5  | Custom Content |
| FAM30A   | family with sequence similarity 30 member A  | Custom Content |
| KLF2     | Kruppel-like factor 2  | Custom Content |
| LIPA     | lipase A, lysosomal acid, cholesterol esterase   | Custom Content |
| MLANA    | melan-A  | Custom Content |
| MRE11    | MRE11 homolog, double strand break repair nuclease   | Custom Content |
| NEIL2    | nei like DNA glycosylase 2   | Custom Content |
| PHACTR2  | phosphatase and actin regulator 2  | Custom Content |
| PNOC     | prepronociceptin   | Custom Content |
| PTGER4   | prostaglandin E receptor 4 (subtype EP4)   | Custom Content |
| RPA1     | replication protein A1   | Custom Content |
| SEMA4A   | sema domain, immunoglobulin domain (Ig), transmembrane domain (TM) and short cytoplasmic domain, (semaphorin) 4A | Custom Content |
| SIGLEC5  | sialic acid binding Ig-like lectin 5   | Custom Content |
| SPIB     | Spi-B transcription factor (Spi-1/PU.1 related)  | Custom Content |
| TCL1A    | T-cell leukemia/lymphoma 1A  | Custom Content |
| TFAP4    | transcription factor AP-4 (activating enhancer binding protein 4)  | Custom Content |
| TOP3A    | topoisomerase (DNA) III alpha  | Custom Content |
| TREX1    | three prime repair exonuclease 1   | Custom Content |
| VSIR     | V-set immunoregulatory receptor  | Custom Content |
| CD69     | CD69 molecule  | Custom Content |
| FOXO1    | forkhead box O1  | Custom Content |
| GAPDH    | glyceraldehyde-3-phosphate dehydrogenase   | Custom Content |
| HDC      | histidine decarboxylase  | Custom Content |
| HLA-DRB1 | major histocompatibility complex, class II, DR beta 1  | Custom Content |



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|----------|--|----------------|
| IHH      | Indian hedgehog  | Custom Content |
| IL4I1    | interleukin 4 induced 1  | Custom Content |
| KDR      | kinase insert domain receptor  | Custom Content |
| LEXM     | chromosome 1 open reading frame 177                                  | Custom Content |
| MKI67    | antigen identified by monoclonal antibody                            | Custom Content |
| NKG7     | natural killer cell group 7 sequence                                 | Custom Content |
| NRDE2    | chromosome 14 open reading frame 102                                 | Custom Content |
| OAZ1     | ornithine decarboxylase antizyme 1                                   | Custom Content |
| PF4      | platelet factor 4  | Custom Content |
| PGK1     | phosphoglycerate kinase 1  | Custom Content |
| PROK2    | prokineticin 2   | Custom Content |
| PROM1    | prominin 1   | Custom Content |
| REN      | renin  | Custom Content |
| RPLP0    | ribosomal protein, large, P0   | Custom Content |
| SLC1A5   | solute carrier family 1 (neutral amino acid transporter), member 5   | Custom Content |
| SLC7A5   | solute carrier family 7 member 5                                     | Custom Content |
| SP2      | Sp2 transcription factor   | Custom Content |
| SPI1     | spleen focus forming virus (SFFV) proviral integration oncogene spi1 | Custom Content |
| STK11IP  | serine/threonine kinase 11 interacting protein                       | Custom Content |
| TBC1D10B | TBC1 domain family, member 10B                                       | Custom Content |
| TRAT1    | T cell receptor associated transmembrane adaptor 1                   | Custom Content |
| TSLP     | thymic stromal lymphopoietin   | Custom Content |
| UBB      | ubiquitin B  | Custom Content |
| XCL1     | chemokine (C motif) ligand 1   | Custom Content |