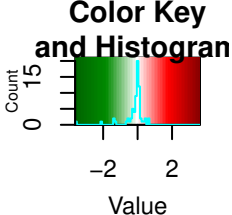


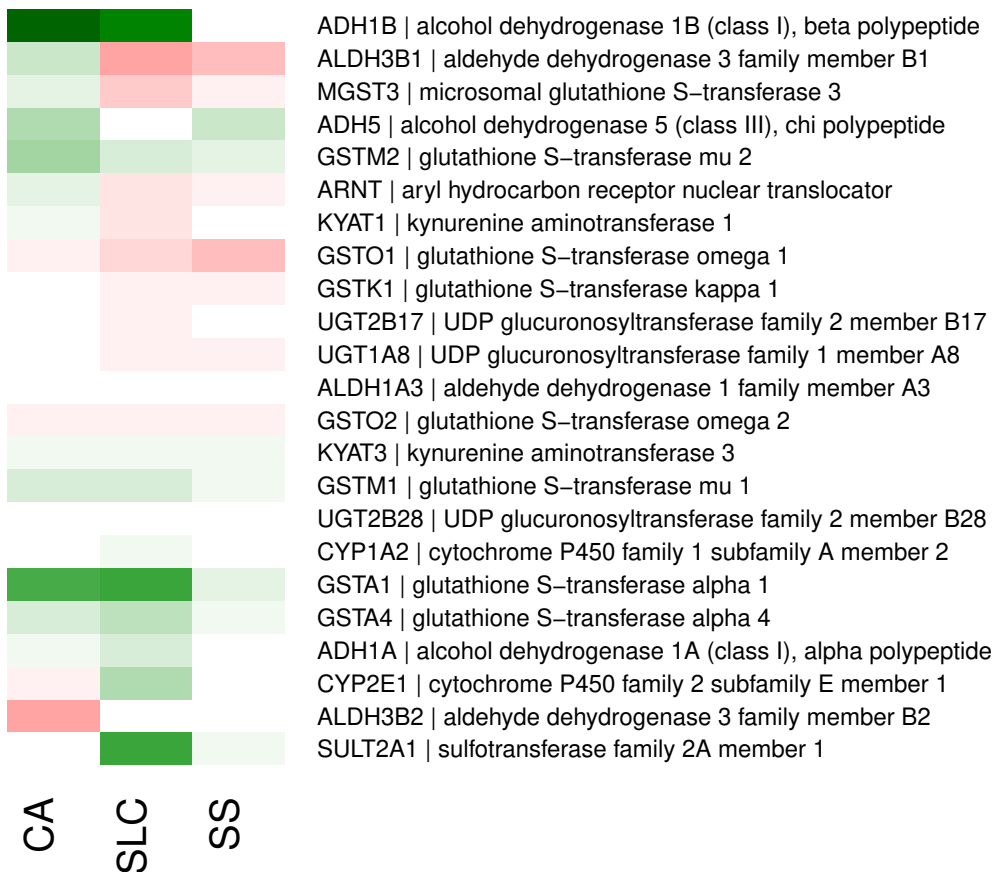
Supplementary Figure S2.

Gene level heatmap of each of the selected 66 pathways. Log2 fold change (LFC) for each gene was calculated from disease and normal samples (disease-normal) for all studies. For each disease type (CA, SLC or SS), median LFC was calculated across the studies in that disease type. Combined heatmap was generated based on the pathway genes and the three disease groups. We considered only those genes which have similar LFC directionality in SLC and SS. Red color represents up-regulation in disease compared to control, while green color represents down-regulation. Pathway names with KEGG identifiers are shown on the top, gene symbol and names are row-labels of heatmap. The major class (to which the pathway belongs) is shown at the bottom.

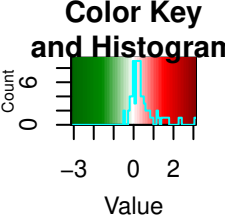


Chemical carcinogenesis

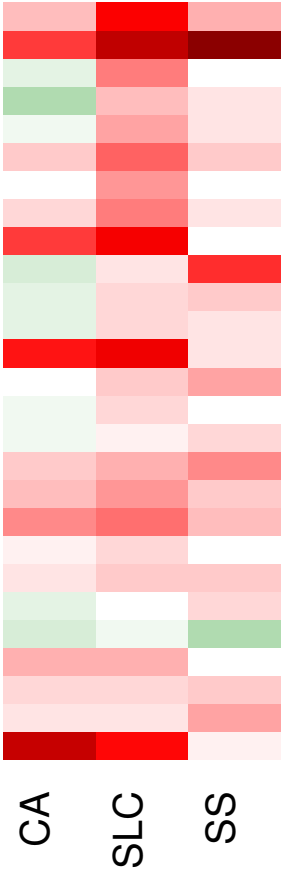
hsa05204



Cancer

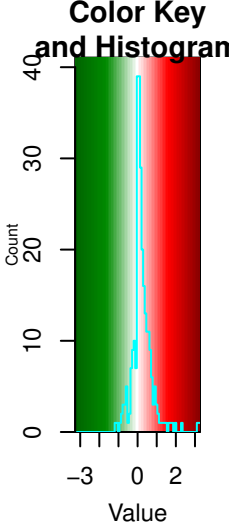


Bladder cancer hsa05219



TYMP | thymidine phosphorylase
MMP9 | matrix metalloproteinase 9
MMP2 | matrix metalloproteinase 2
MAPK3 | mitogen-activated protein kinase 3
RB1 | RB transcriptional corepressor 1
VEGFA | vascular endothelial growth factor A
DAPK3 | death associated protein kinase 3
NRAS | NRAS proto-oncogene, GTPase
CDKN2A | cyclin dependent kinase inhibitor 2A
THBS1 | thrombospondin 1
EGFR | epidermal growth factor receptor
ARAF | A-Raf proto-oncogene, serine/threonine kinase
E2F1 | E2F transcription factor 1
MAPK1 | mitogen-activated protein kinase 1
FGFR3 | fibroblast growth factor receptor 3
DAPK2 | death associated protein kinase 2
MDM2 | MDM2 proto-oncogene
E2F2 | E2F transcription factor 2
E2F3 | E2F transcription factor 3
MAP2K1 | mitogen-activated protein kinase kinase 1
MAP2K2 | mitogen-activated protein kinase kinase 2
EGF | epidermal growth factor
RPS6KA5 | ribosomal protein S6 kinase A5
ERBB2 | erb-b2 receptor tyrosine kinase 2
KRAS | KRAS proto-oncogene, GTPase
BRAF | B-Raf proto-oncogene, serine/threonine kinase
MMP1 | matrix metalloproteinase 1

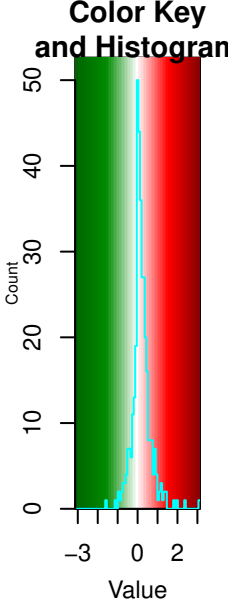
Cancer



Transcriptional misregulation in cancer

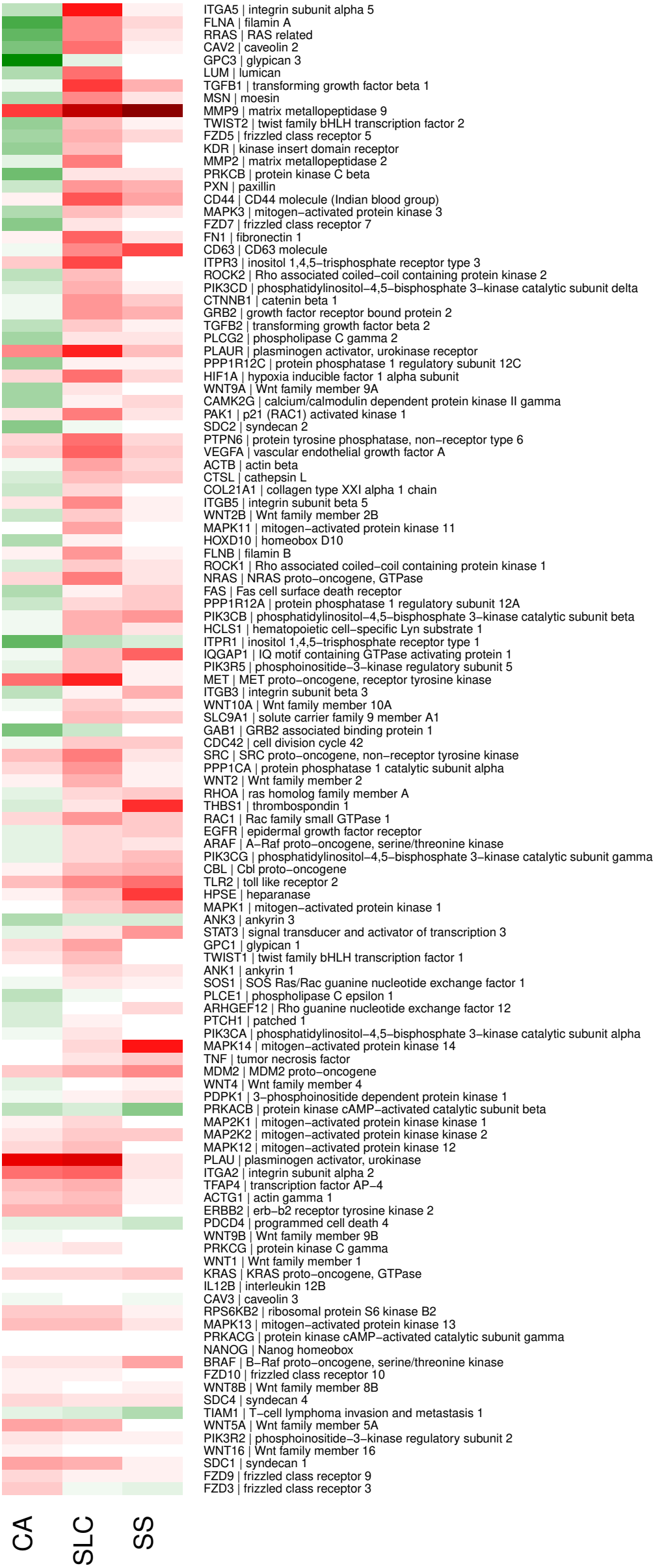
hsa05202



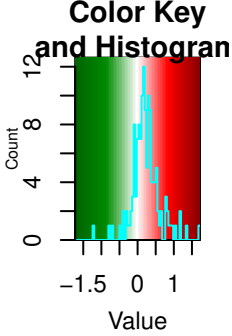


Proteoglycans in cancer

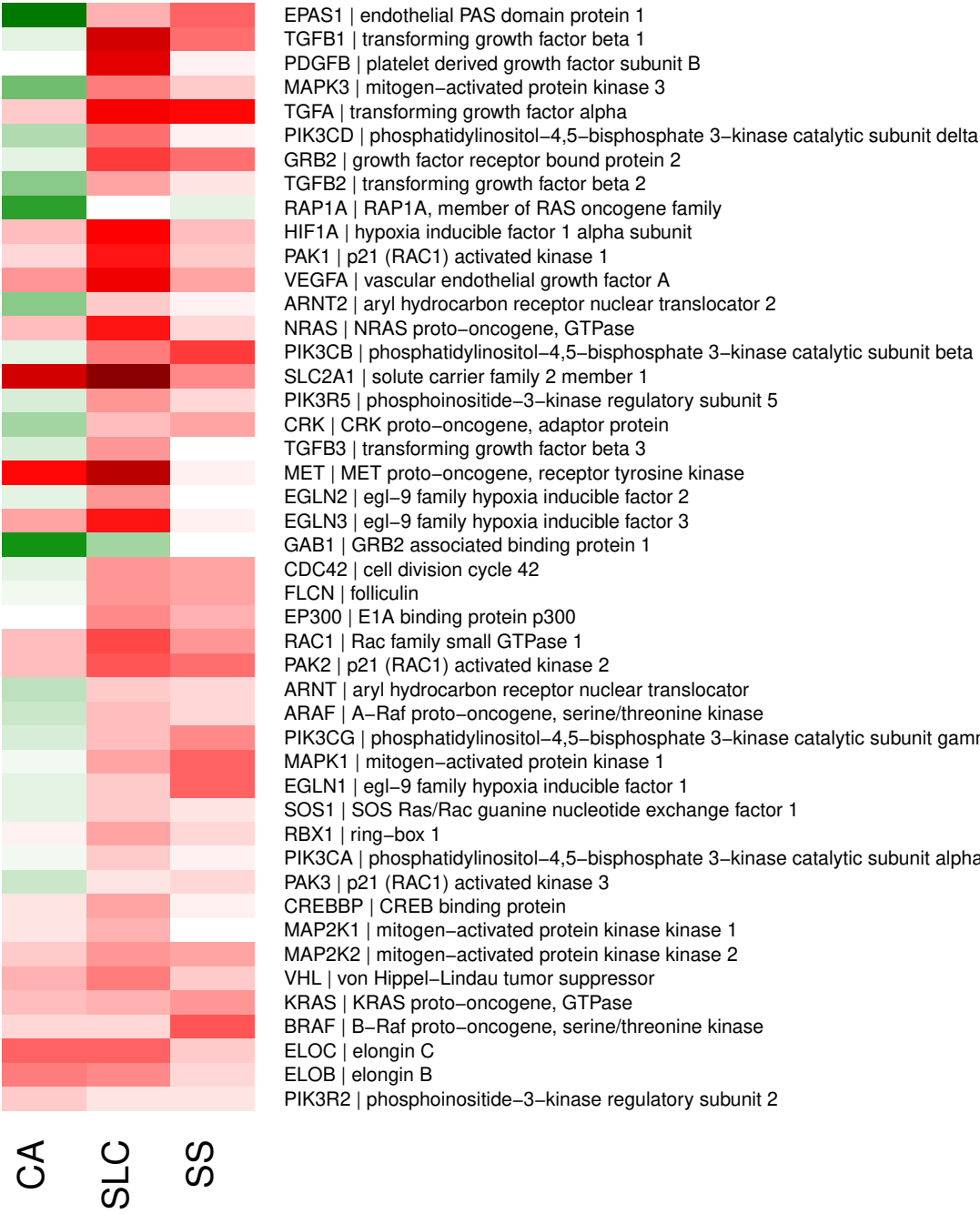
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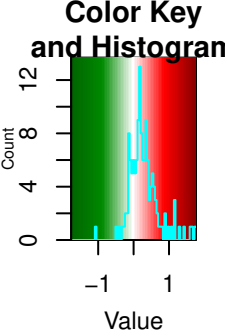


Cancer



Renal cell carcinoma hsa05211

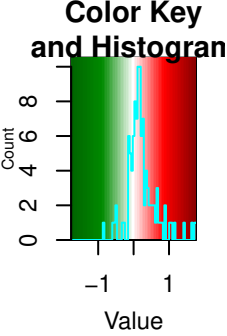




**Pancreatic cancer
hsa05212**



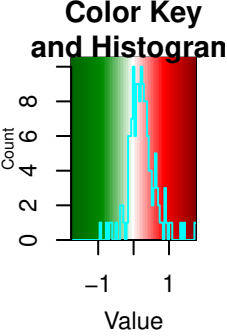
Cancer



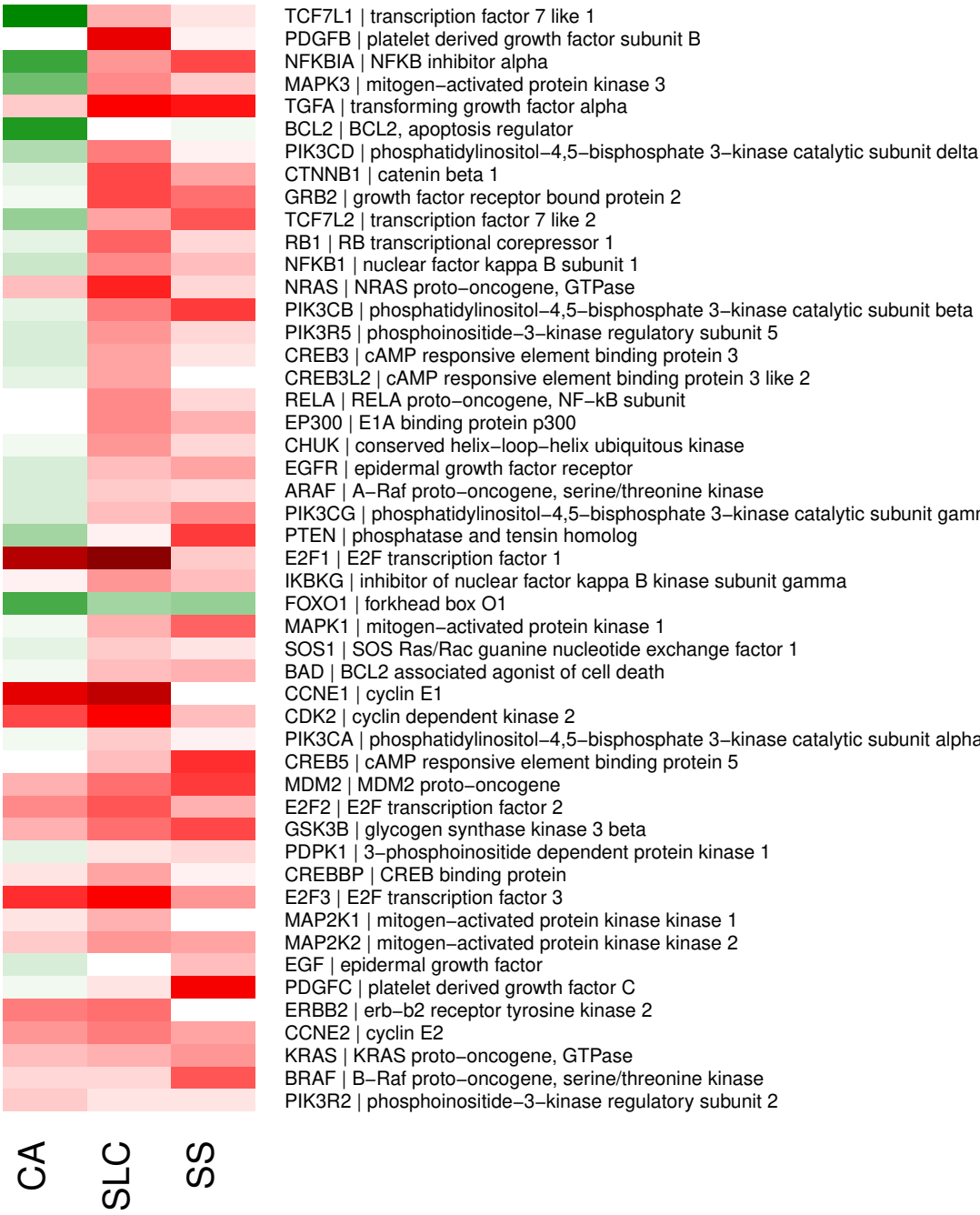
Glioma hsa05214



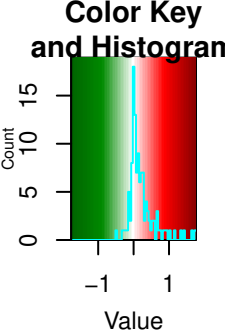
Cancer



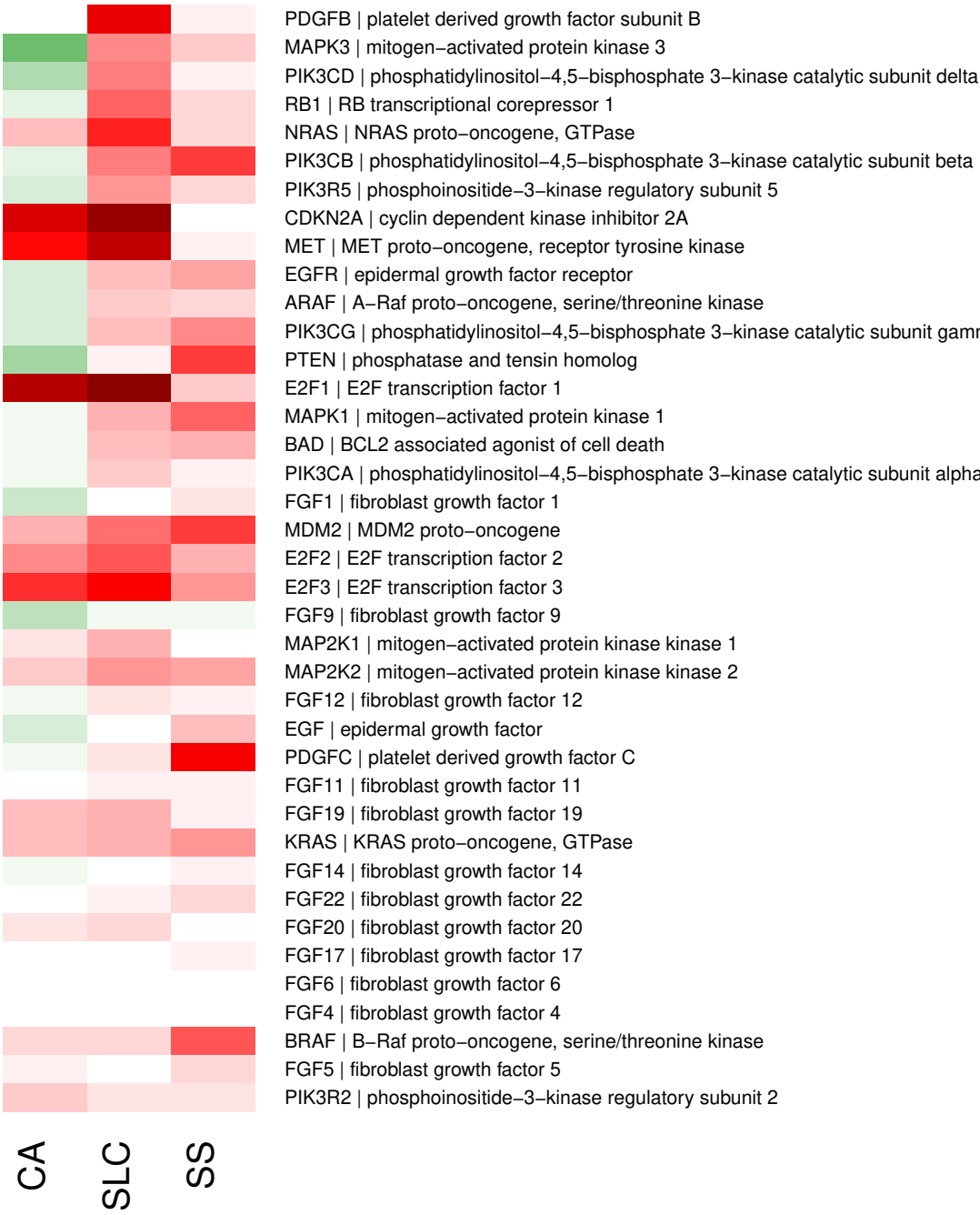
Prostate cancer hsa05215

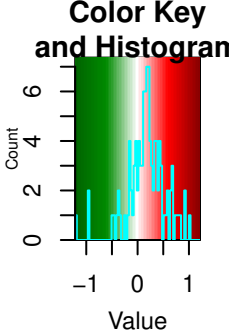


Cancer

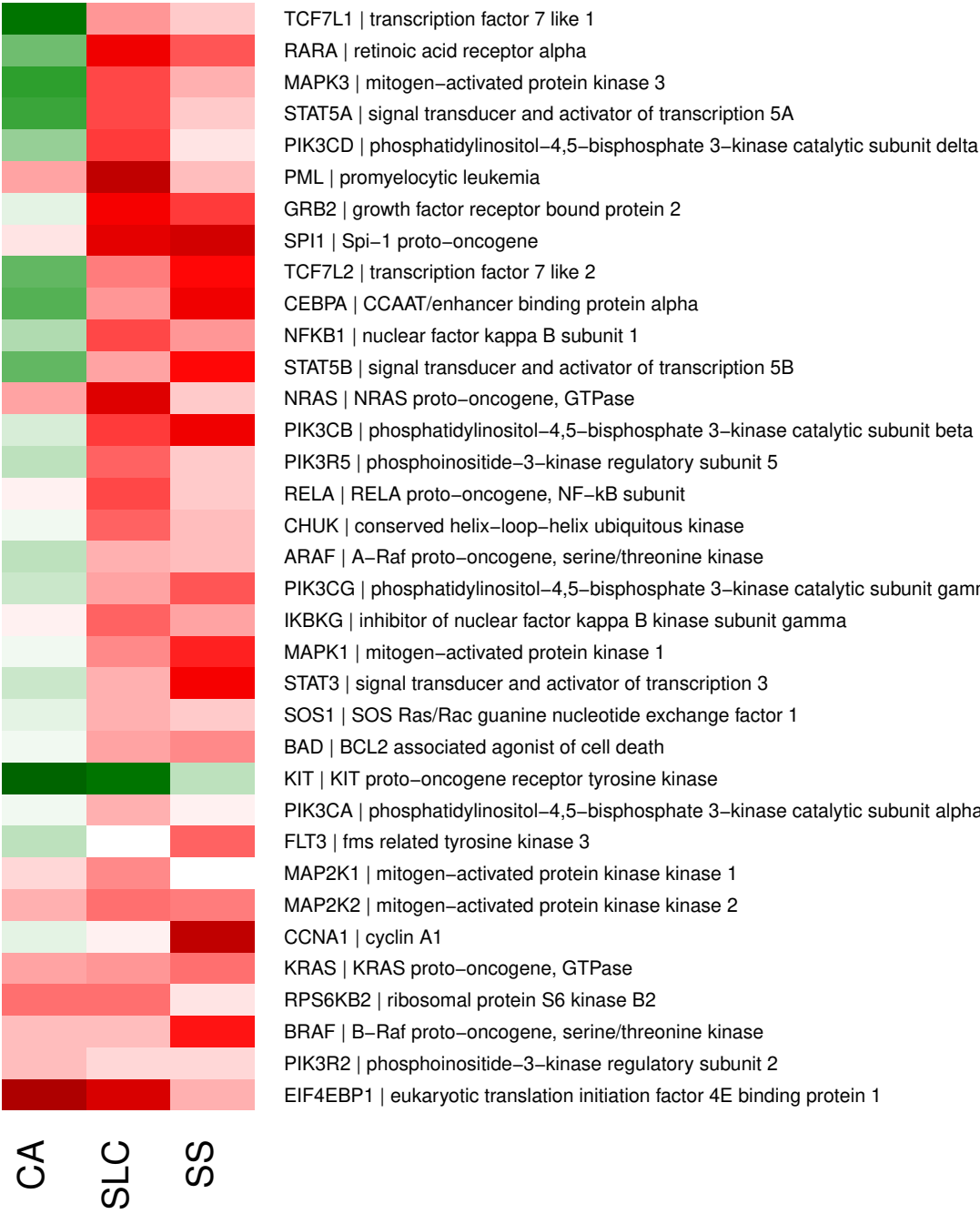


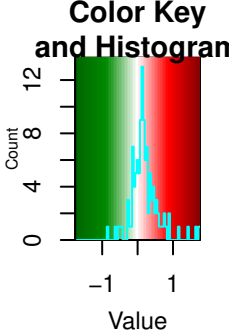
**Melanoma
hsa05218**





Acute myeloid leukemia hsa05221





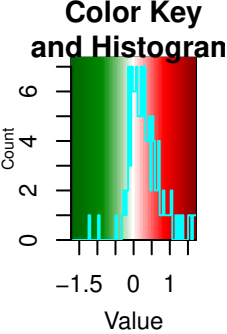
Non-small cell lung cancer hsa05223



Cancer

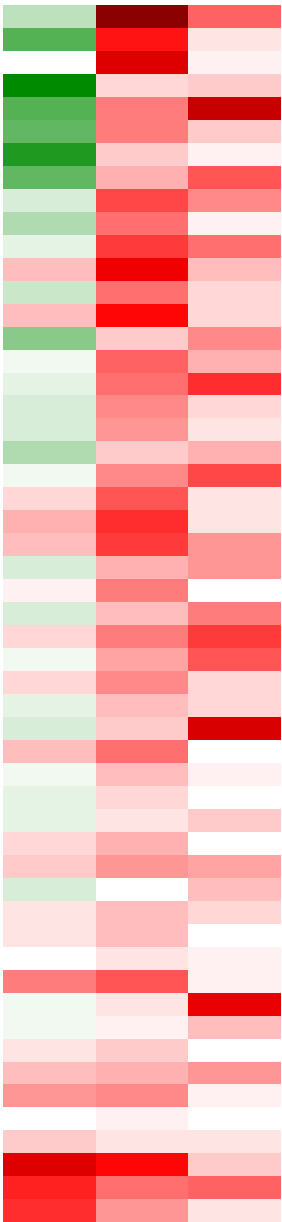
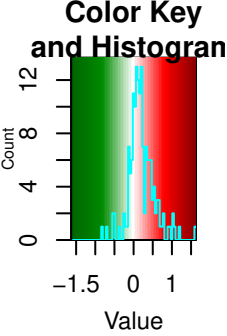
Central carbon metabolism in cancer

hsa05230



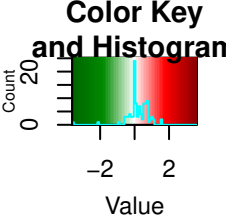
Cancer

Choline metabolism in cancer
hsa05231



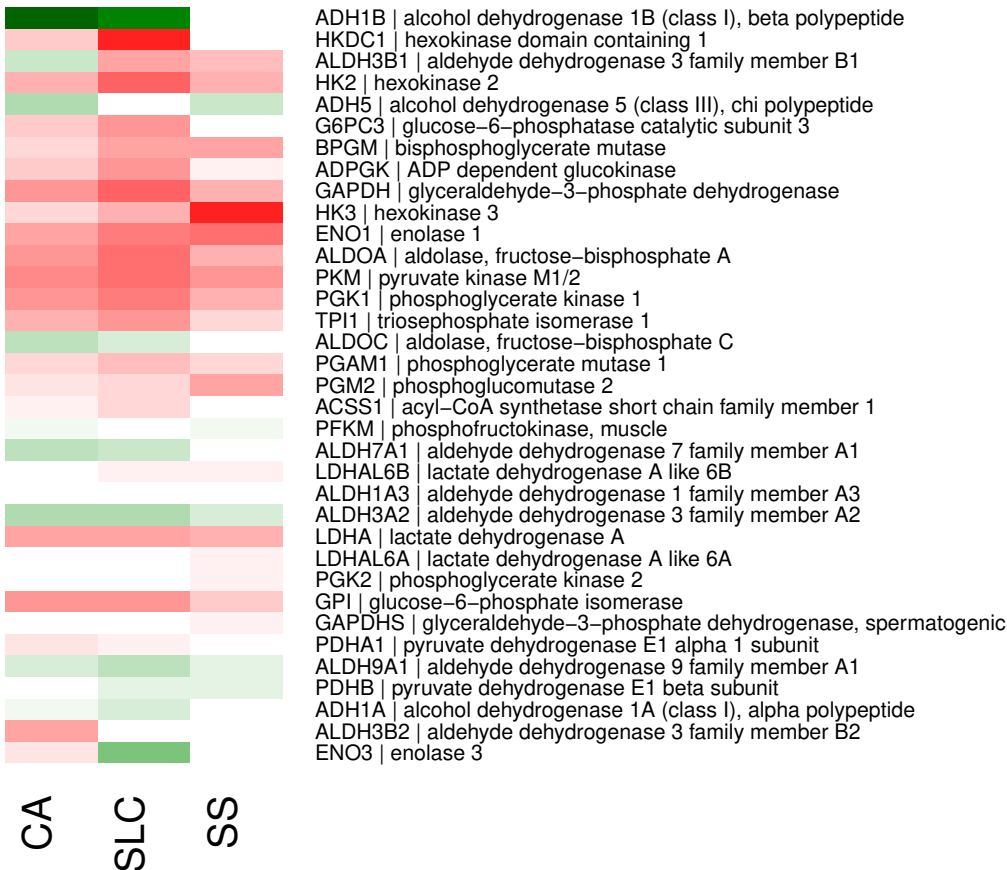
RAC2 | Rac family small GTPase 2
SLC44A4 | solute carrier family 44 member 4
PDGFB | platelet derived growth factor subunit B
PRKCB | protein kinase C beta
SLC22A4 | solute carrier family 22 member 4
MAPK3 | mitogen-activated protein kinase 3
PIP5K1B | phosphatidylinositol-4-phosphate 5-kinase type 1 beta
PLA2G4A | phospholipase A2 group IVA
SLC44A1 | solute carrier family 44 member 1
PIK3CD | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta
GRB2 | growth factor receptor bound protein 2
HIF1A | hypoxia inducible factor 1 alpha subunit
CHKA | choline kinase alpha
NRAS | NRAS proto-oncogene, GTPase
WASF2 | WAS protein family member 2
WAS | Wiskott-Aldrich syndrome
PIK3CB | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
PIK3R5 | phosphoinositide-3-kinase regulatory subunit 5
SLC44A3 | solute carrier family 44 member 3
GPCPD1 | glycerophosphocholine phosphodiesterase 1
PCYT1A | phosphate cytidylyltransferase 1, choline, alpha
SLC44A5 | solute carrier family 44 member 5
RHEB | Ras homolog, mTORC1 binding
RAC1 | Rac family small GTPase 1
EGFR | epidermal growth factor receptor
DGKH | diacylglycerol kinase eta
PIK3CG | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma
SP1 | Sp1 transcription factor
MAPK1 | mitogen-activated protein kinase 1
PLD2 | phospholipase D2
SOS1 | SOS Ras/Rac guanine nucleotide exchange factor 1
PLD1 | phospholipase D1
PIP5K1A | phosphatidylinositol-4-phosphate 5-kinase type 1 alpha
PIK3CA | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
DGKG | diacylglycerol kinase gamma
PDPK1 | 3-phosphoinositide dependent protein kinase 1
MAP2K1 | mitogen-activated protein kinase kinase 1
MAP2K2 | mitogen-activated protein kinase kinase 2
EGF | epidermal growth factor
WASL | Wiskott-Aldrich syndrome like
SLC22A5 | solute carrier family 22 member 5
DGKI | diacylglycerol kinase iota
WASF1 | WAS protein family member 1
PDGFC | platelet derived growth factor C
PCYT1B | phosphate cytidylyltransferase 1, choline, beta
PRKCG | protein kinase C gamma
KRAS | KRAS proto-oncogene, GTPase
RPS6KB2 | ribosomal protein S6 kinase B2
TSC2 | TSC complex subunit 2
PIK3R2 | phosphoinositide-3-kinase regulatory subunit 2
EIF4EBP1 | eukaryotic translation initiation factor 4E binding protein 1
LYPLA1 | lysophospholipase I
RAC3 | Rac family small GTPase 3

Cancer

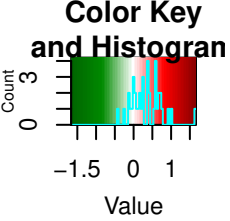


Glycolysis / Gluconeogenesis

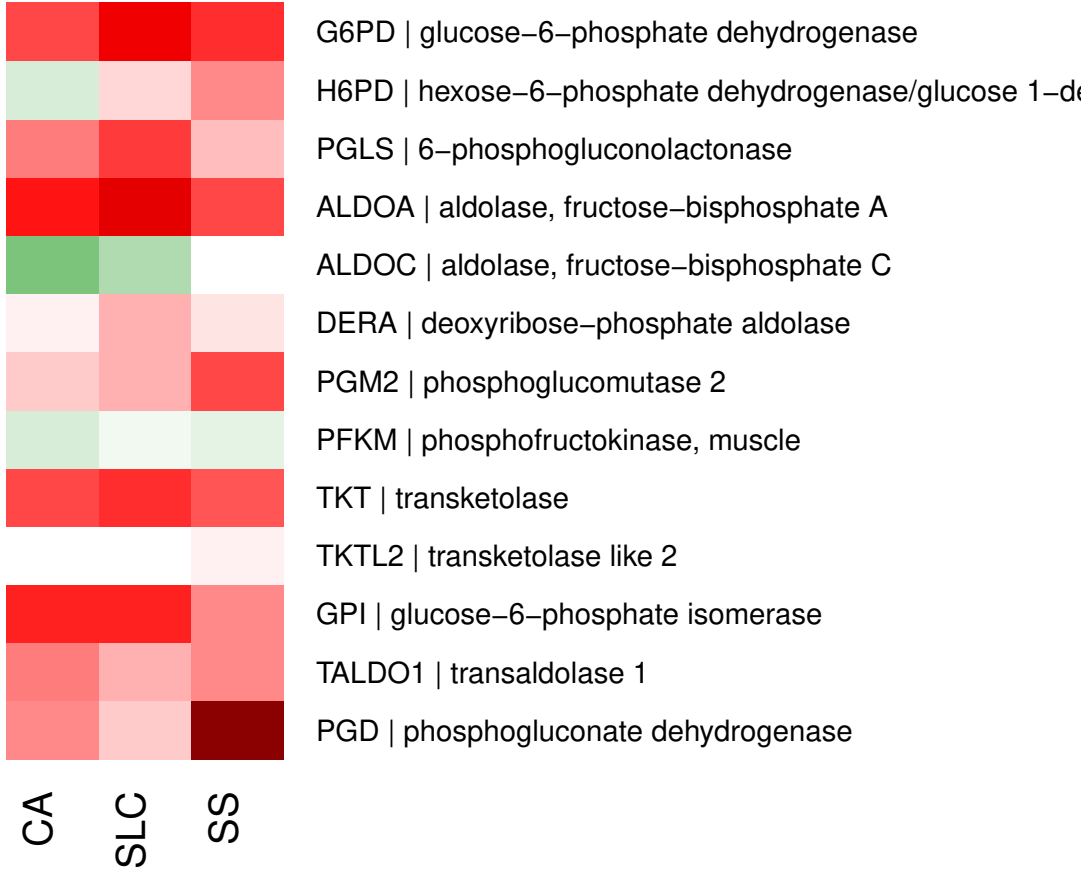
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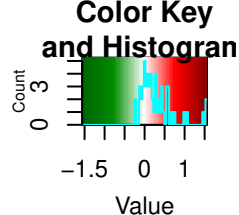
Carbohydrate metabolism



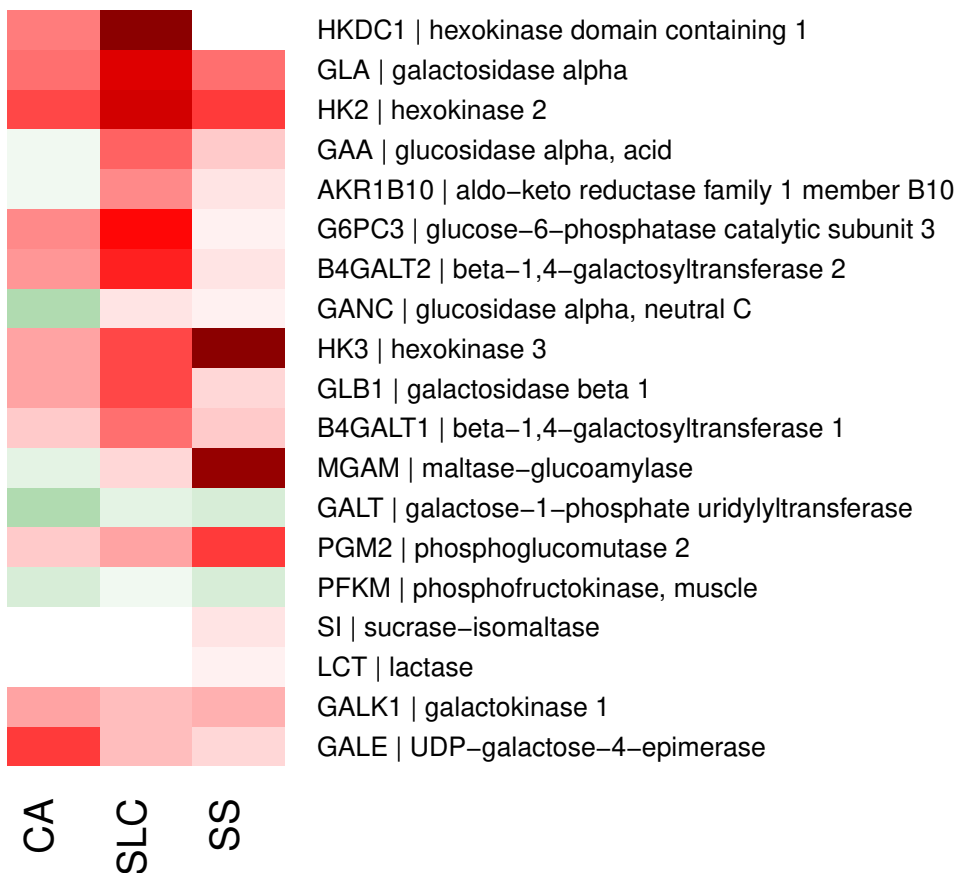
Pentose phosphate pathway hsa00030



Carbohydrate metabolism



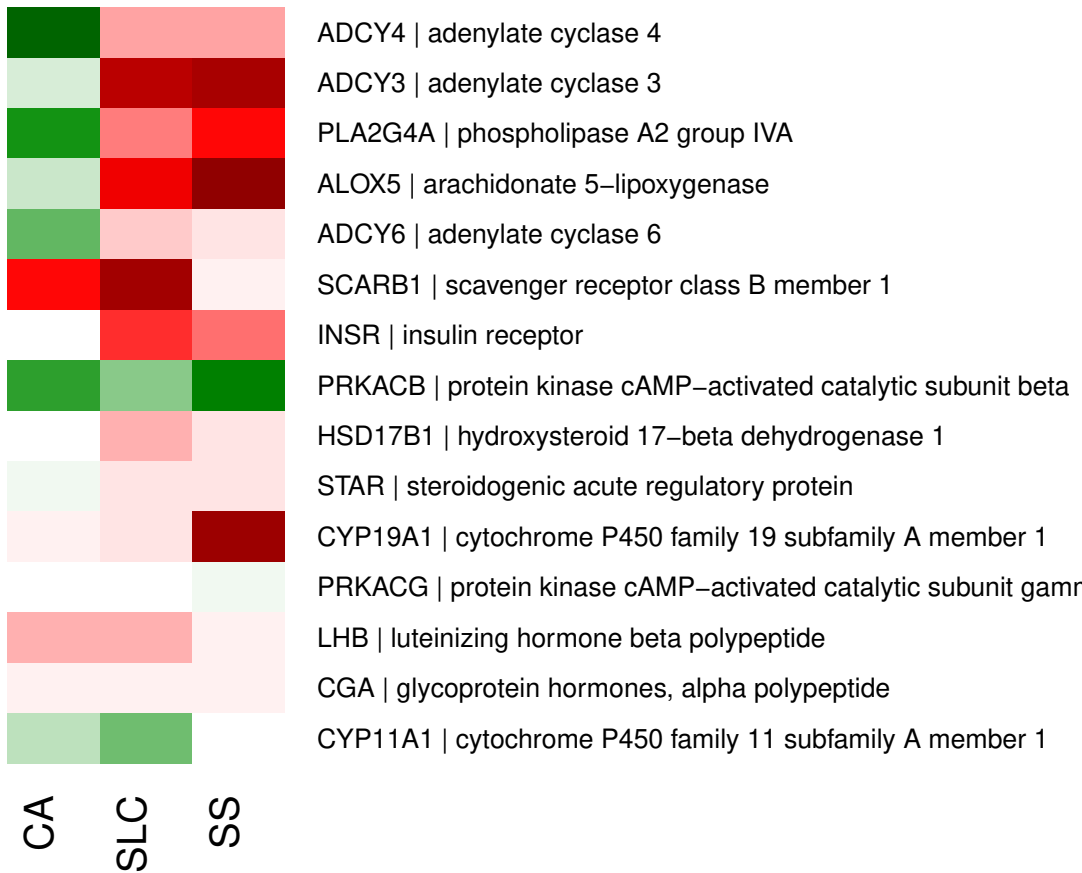
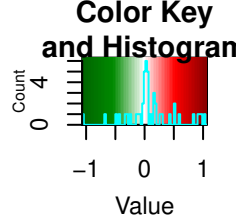
Galactose metabolism hsa00052



Carbohydrate metabolism

Ovarian steroidogenesis

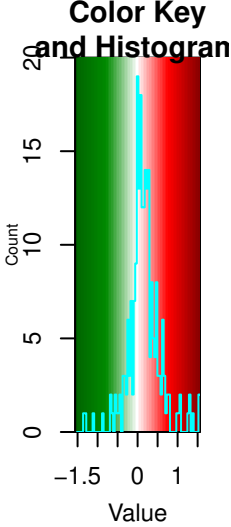
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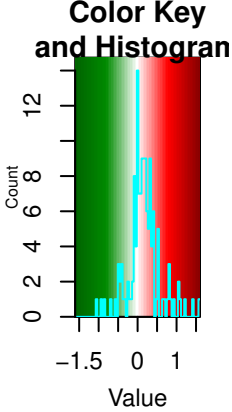
Endocrine system

Insulin signaling pathway

hsa04910

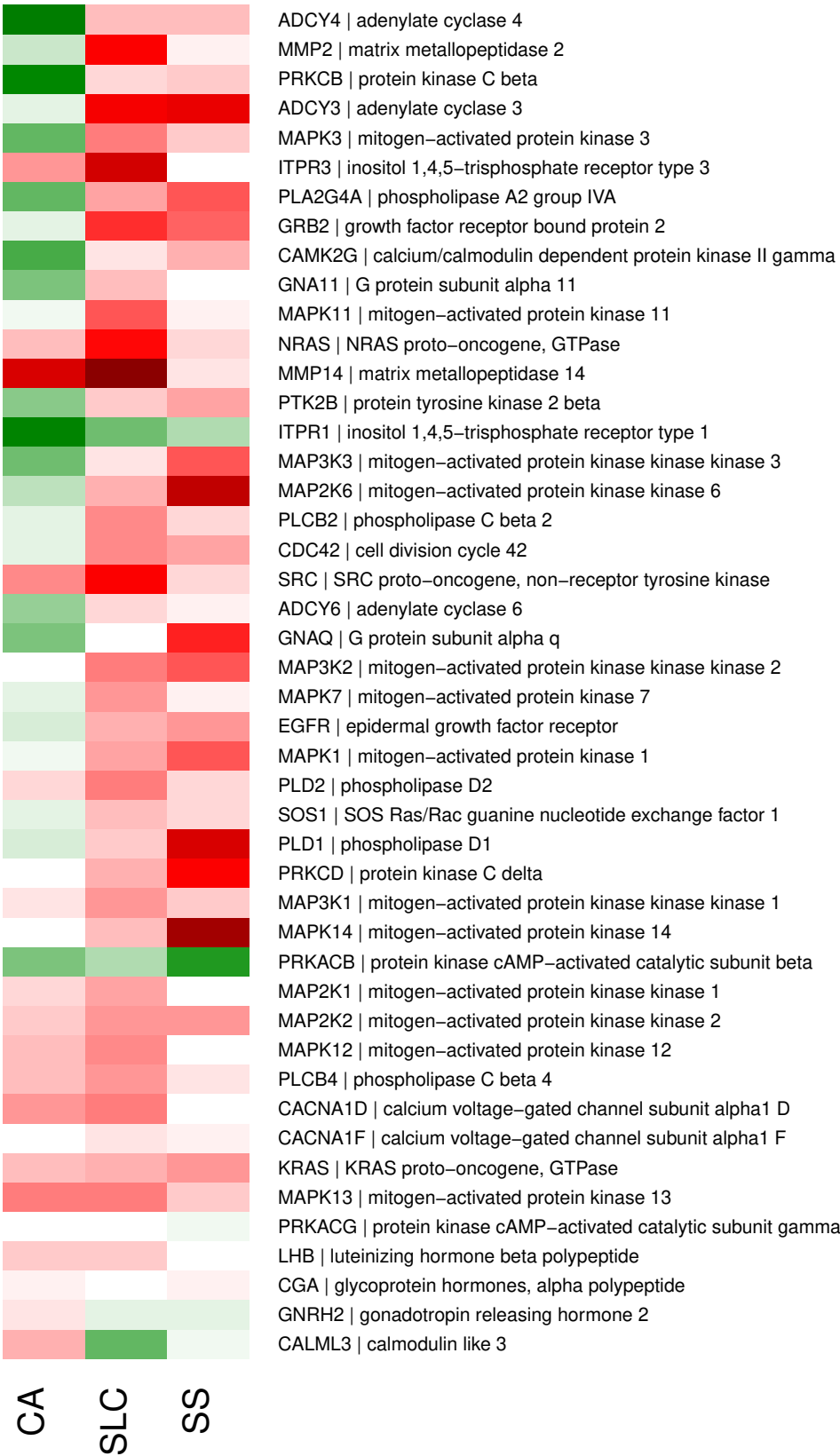


Endocrine system



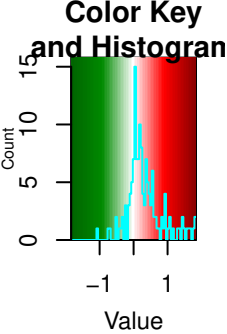
GnRH signaling pathway

hsa04912



Endocrine system

Progesterone-mediated oocyte maturation
hsa04914



ADCY4		adenylate cyclase 4
ADCY3		adenylate cyclase 3
MAPK3		mitogen-activated protein kinase 3
GNAI2		G protein subunit alpha i2
CCNA2		cyclin A2
PIK3CD		phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta
CCNB2		cyclin B2
RPS6KA1		ribosomal protein S6 kinase A1
MAPK11		mitogen-activated protein kinase 11
PIK3CB		phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
PIK3R5		phosphoinositide-3-kinase regulatory subunit 5
CDK1		cyclin dependent kinase 1
CCNB1		cyclin B1
ADCY6		adenylate cyclase 6
CDC27		cell division cycle 27
BUB1		BUB1 mitotic checkpoint serine/threonine kinase
PLK1		polo like kinase 1
PDE3B		phosphodiesterase 3B
ARAF		A-Raf proto-oncogene, serine/threonine kinase
PIK3CG		phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma
CDC26		cell division cycle 26
MAPK1		mitogen-activated protein kinase 1
PKMYT1		protein kinase, membrane associated tyrosine/threonine 1
CDC25C		cell division cycle 25C
FZR1		fizzy and cell division cycle 20 related 1
CDK2		cyclin dependent kinase 2
PIK3CA		phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
GNAI1		G protein subunit alpha i1
MAPK14		mitogen-activated protein kinase 14
RPS6KA3		ribosomal protein S6 kinase A3
GNAI3		G protein subunit alpha i3
PRKACB		protein kinase cAMP-activated catalytic subunit beta
MAP2K1		mitogen-activated protein kinase kinase 1
MAPK12		mitogen-activated protein kinase 12
CCNA1		cyclin A1
ANAPC5		anaphase promoting complex subunit 5
KRAS		KRAS proto-oncogene, GTPase
CCNB3		cyclin B3
MAPK13		mitogen-activated protein kinase 13
PRKACG		protein kinase cAMP-activated catalytic subunit gamma
BRAF		B-Raf proto-oncogene, serine/threonine kinase
SPDYA		speedy/RINGO cell cycle regulator family member A
PIK3R2		phosphoinositide-3-kinase regulatory subunit 2
CDC25A		cell division cycle 25A
ANAPC11		anaphase promoting complex subunit 11
MAD2L2		mitotic arrest deficient 2 like 2

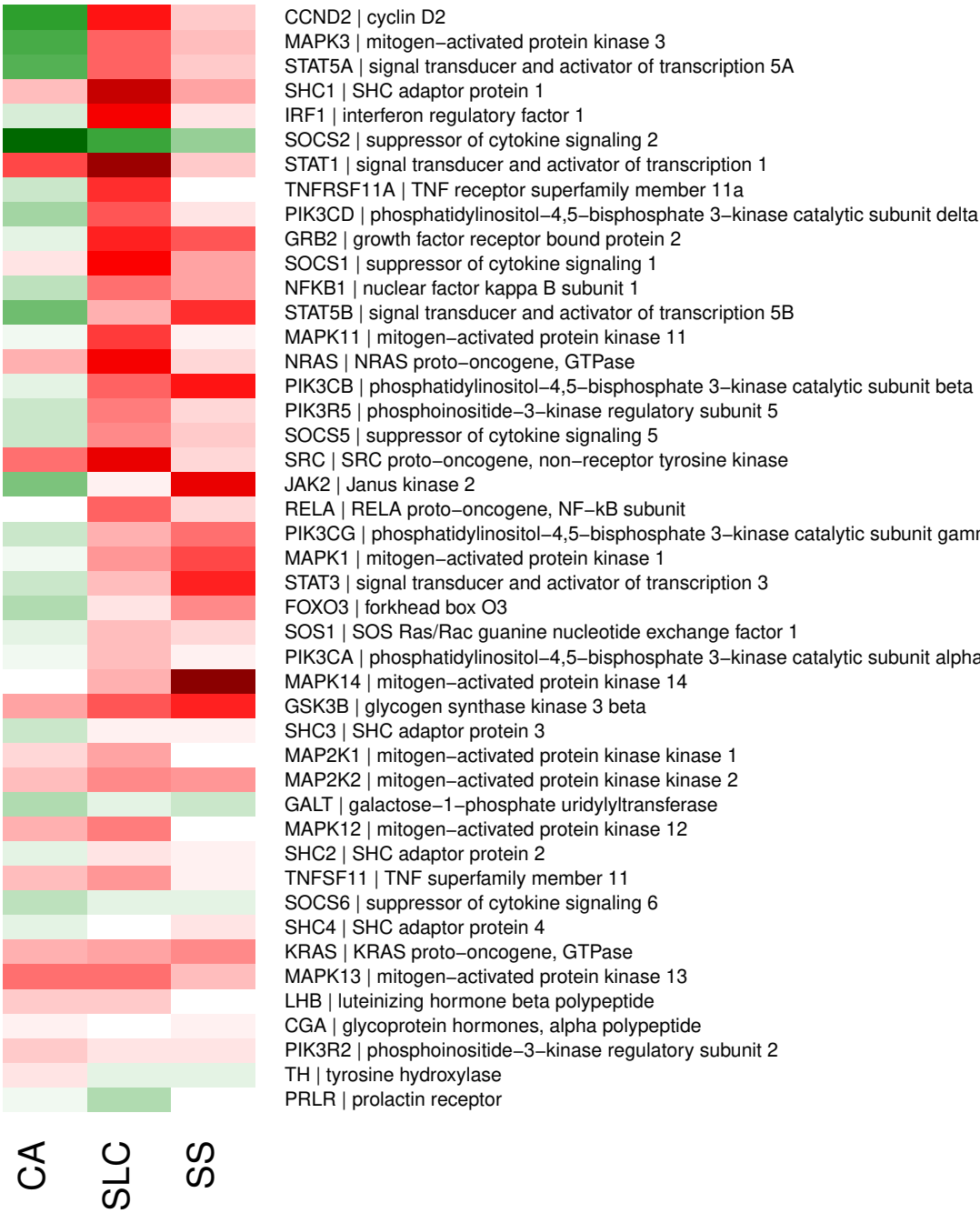
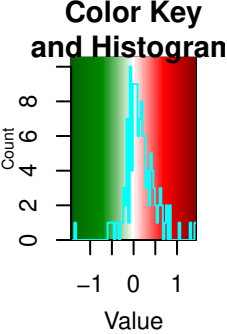
CA

SLC

SS

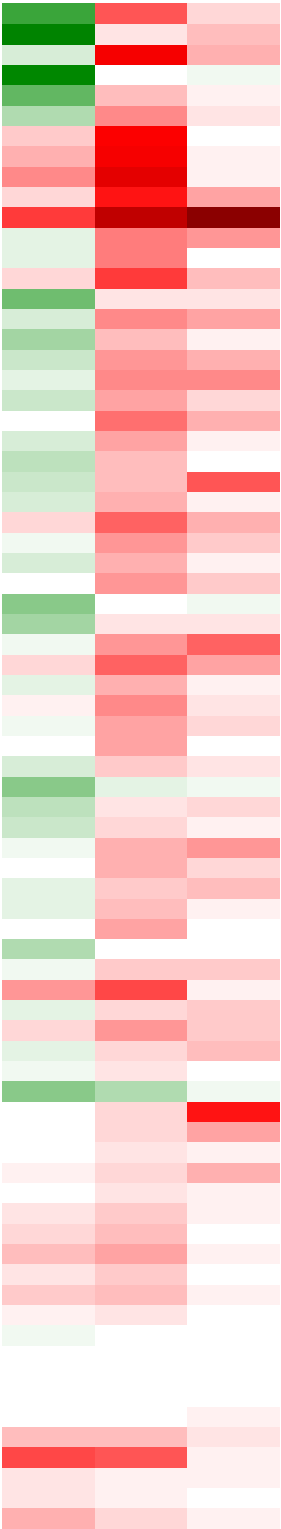
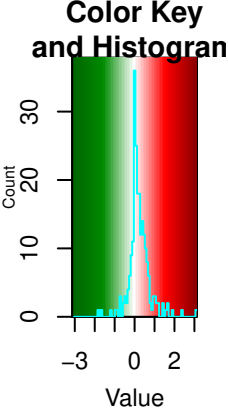
Endocrine system

Prolactin signaling pathway
hsa04917



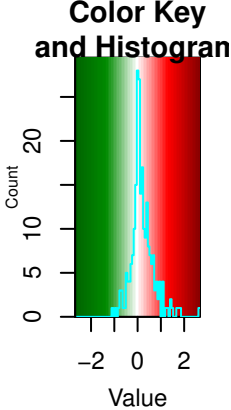
Endocrine system

Leukocyte transendothelial migration
hsa04670



- PECAM1 | platelet and endothelial cell adhesion molecule 1
- MYL9 | myosin light chain 9
- RAC2 | Rac family small GTPase 2
- CLDN5 | claudin 5
- ESAM | endothelial cell adhesion molecule
- MSN | moesin
- CLDN7 | claudin 7
- CLDN4 | claudin 4
- THY1 | Thy-1 cell surface antigen
- ICAM1 | intercellular adhesion molecule 1
- MMP9 | matrix metalloproteinase 9
- ACTN1 | actinin alpha 1
- MMP2 | matrix metalloproteinase 2
- CYBA | cytochrome b-245 alpha chain
- PRKCB | protein kinase C beta
- VASP | vasodilator stimulated phosphoprotein
- VCL | vinculin
- PXN | paxillin
- CYBB | cytochrome b-245 beta chain
- GNAI2 | G protein subunit alpha i2
- ITGB2 | integrin subunit beta 2
- VCAM1 | vascular cell adhesion molecule 1
- ROCK2 | Rho associated coiled-coil containing protein kinase 2
- NCF4 | neutrophil cytosolic factor 4
- PIK3CD | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit delta
- NCF2 | neutrophil cytosolic factor 2
- CTNNB1 | catenin beta 1
- MYL12B | myosin light chain 12B
- ACTN4 | actinin alpha 4
- RAP1A | RAP1A, member of RAS oncogene family
- PLCG2 | phospholipase C gamma 2
- ITGAM | integrin subunit alpha M
- F11R | F11 receptor
- CLDN15 | claudin 15
- SIPA1 | signal-induced proliferation-associated 1
- ACTB | actin beta
- MAPK11 | mitogen-activated protein kinase 11
- ROCK1 | Rho associated coiled-coil containing protein kinase 1
- RAPGEF3 | Rap guanine nucleotide exchange factor 3
- PTK2B | protein tyrosine kinase 2 beta
- CLDN23 | claudin 23
- PIK3CB | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit beta
- VAV1 | vav guanine nucleotide exchange factor 1
- MYL12A | myosin light chain 12A
- PIK3R5 | phosphoinositide-3-kinase regulatory subunit 5
- BCAR1 | BCAR1, Cas family scaffolding protein
- RASSF5 | Ras association domain family member 5
- CDC42 | cell division cycle 42
- CLDN3 | claudin 3
- RHOA | ras homolog family member A
- RAC1 | Rac family small GTPase 1
- PIK3CG | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit gamma
- PIK3CA | phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha
- GNAI1 | G protein subunit alpha i1
- MAPK14 | mitogen-activated protein kinase 14
- CTNNA1 | catenin alpha 1
- CLDN18 | claudin 18
- GNAI3 | G protein subunit alpha i3
- CLDN19 | claudin 19
- NOX1 | NADPH oxidase 1
- MAPK12 | mitogen-activated protein kinase 12
- CLDN2 | claudin 2
- CLDN6 | claudin 6
- ACTG1 | actin gamma 1
- PRKCG | protein kinase C gamma
- MYL2 | myosin light chain 2
- ACTN3 | actinin alpha 3 (gene/pseudogene)
- MYL7 | myosin light chain 7
- MYL10 | myosin light chain 10
- NOX3 | NADPH oxidase 3
- MAPK13 | mitogen-activated protein kinase 13
- CLDN1 | claudin 1
- PIK3R2 | phosphoinositide-3-kinase regulatory subunit 2
- CLDN14 | claudin 14
- CLDN9 | claudin 9

Immune system

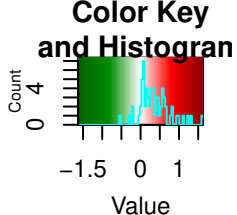


Platelet activation

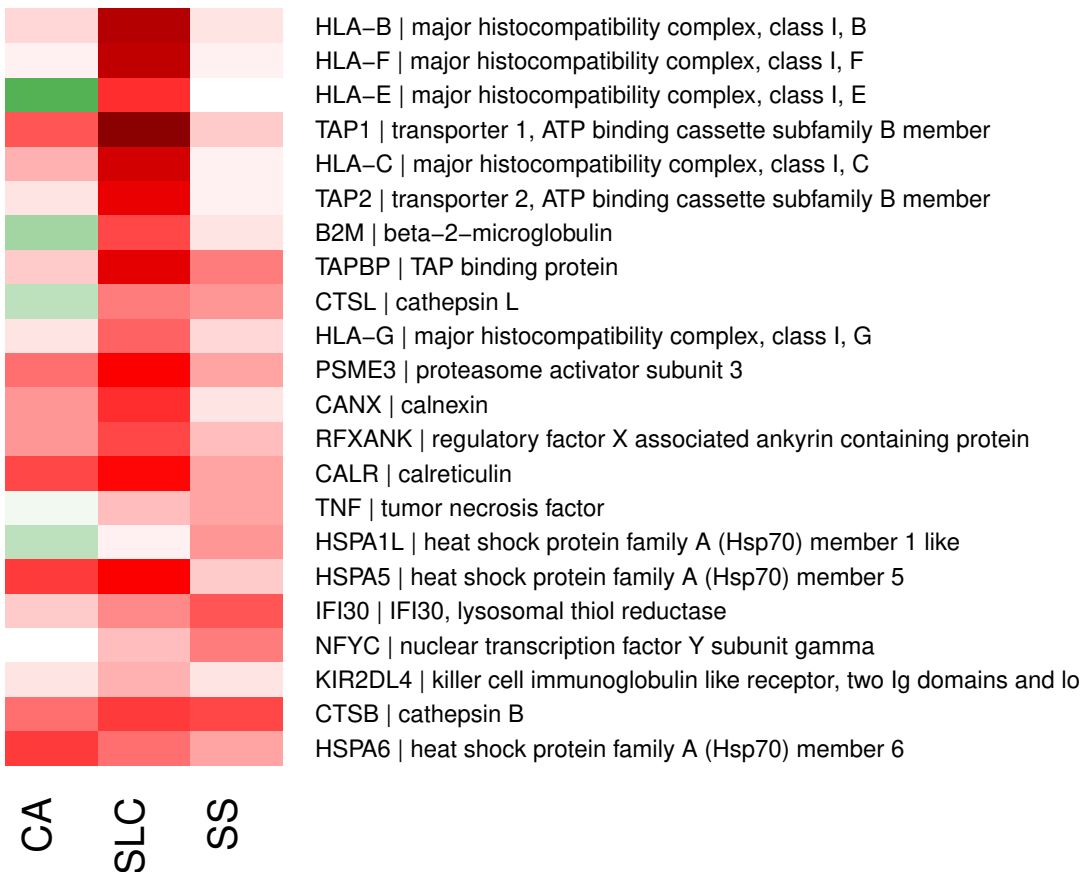
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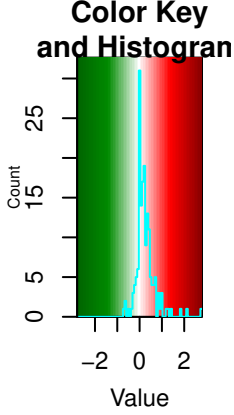
Immune system



Antigen processing and presentation hsa04612

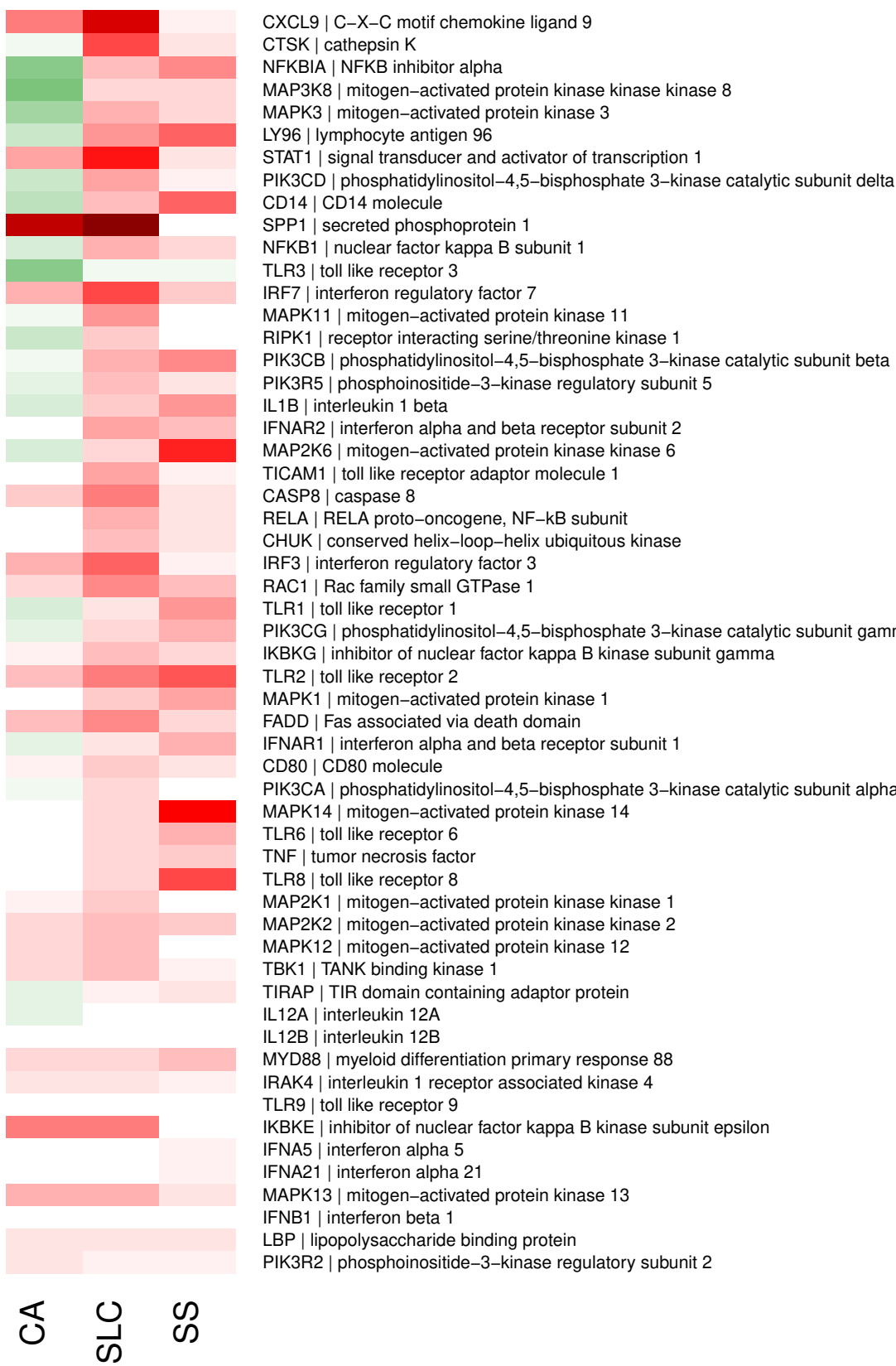


Immune system

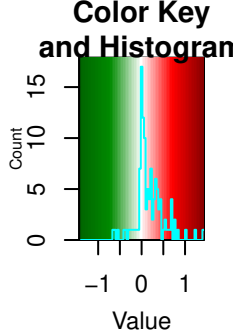


Toll-like receptor signaling pathway

hsa04620

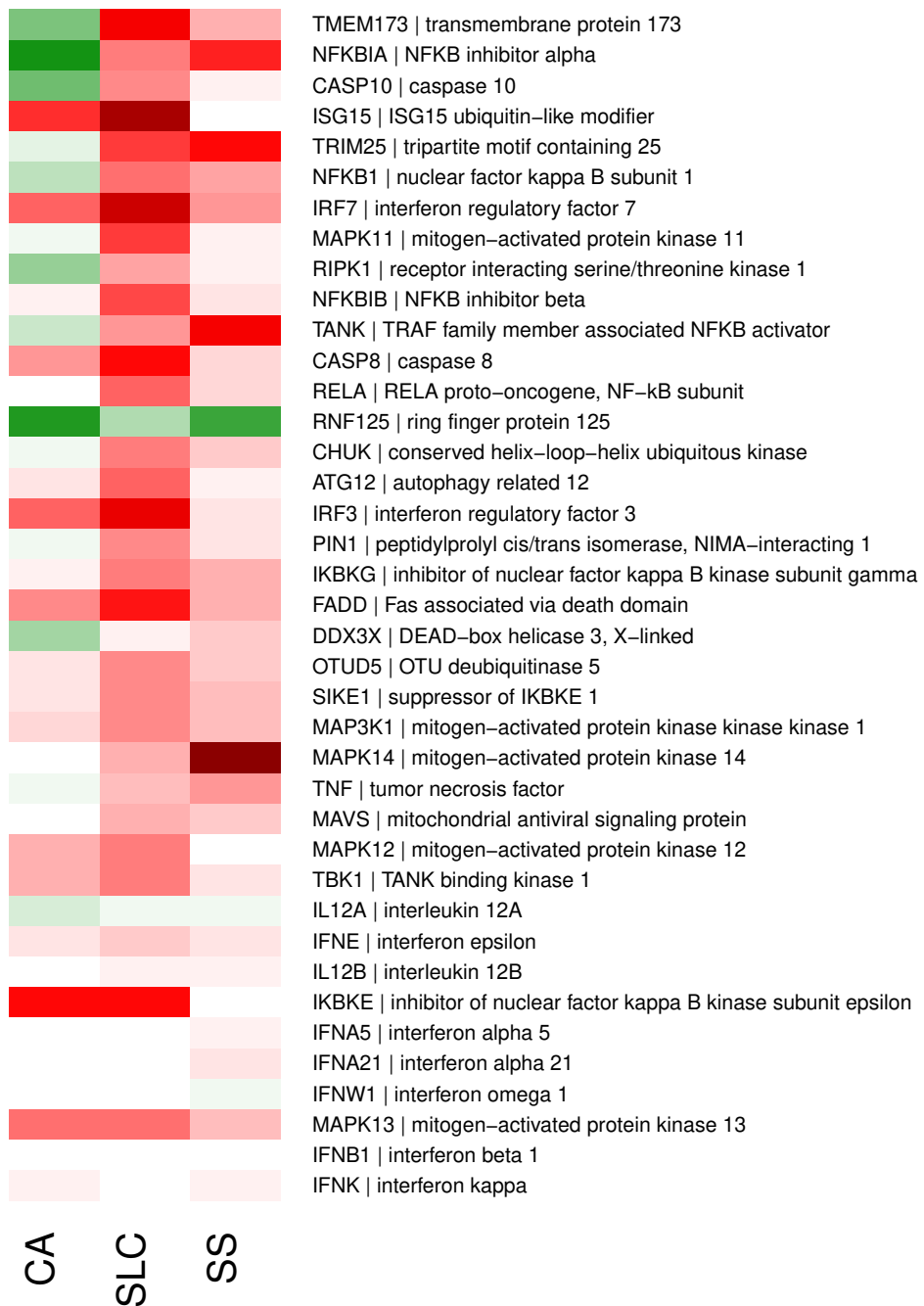


Immune system



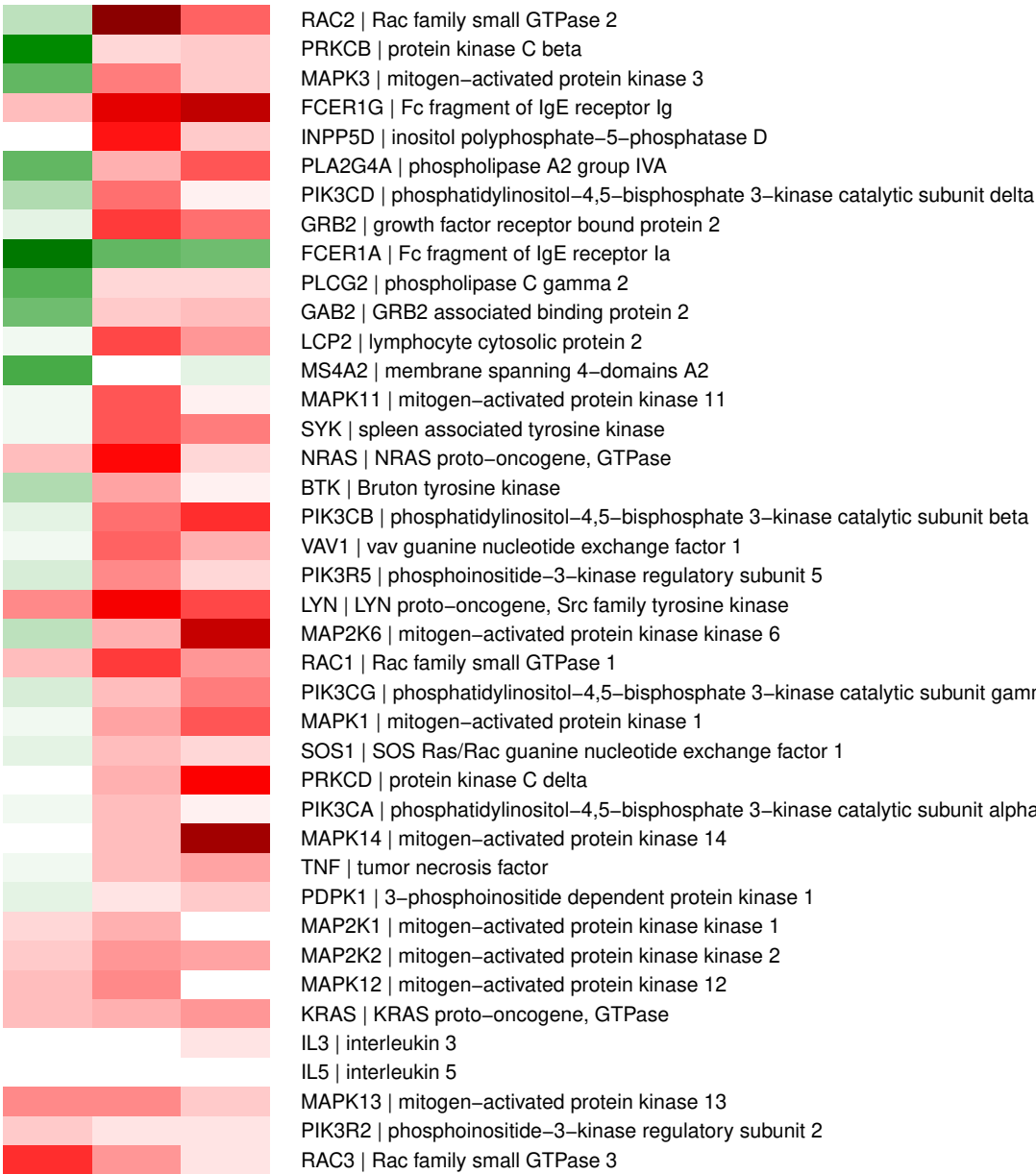
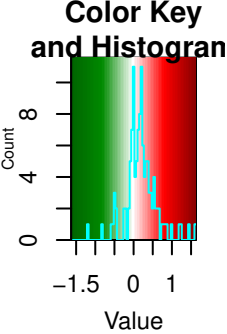
RIG-I-like receptor signaling pathway

hsa04622



Immune system

Fc epsilon RI signaling pathway
hsa04664

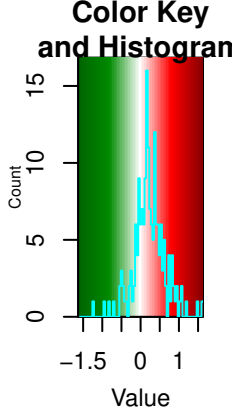


CA

SLC

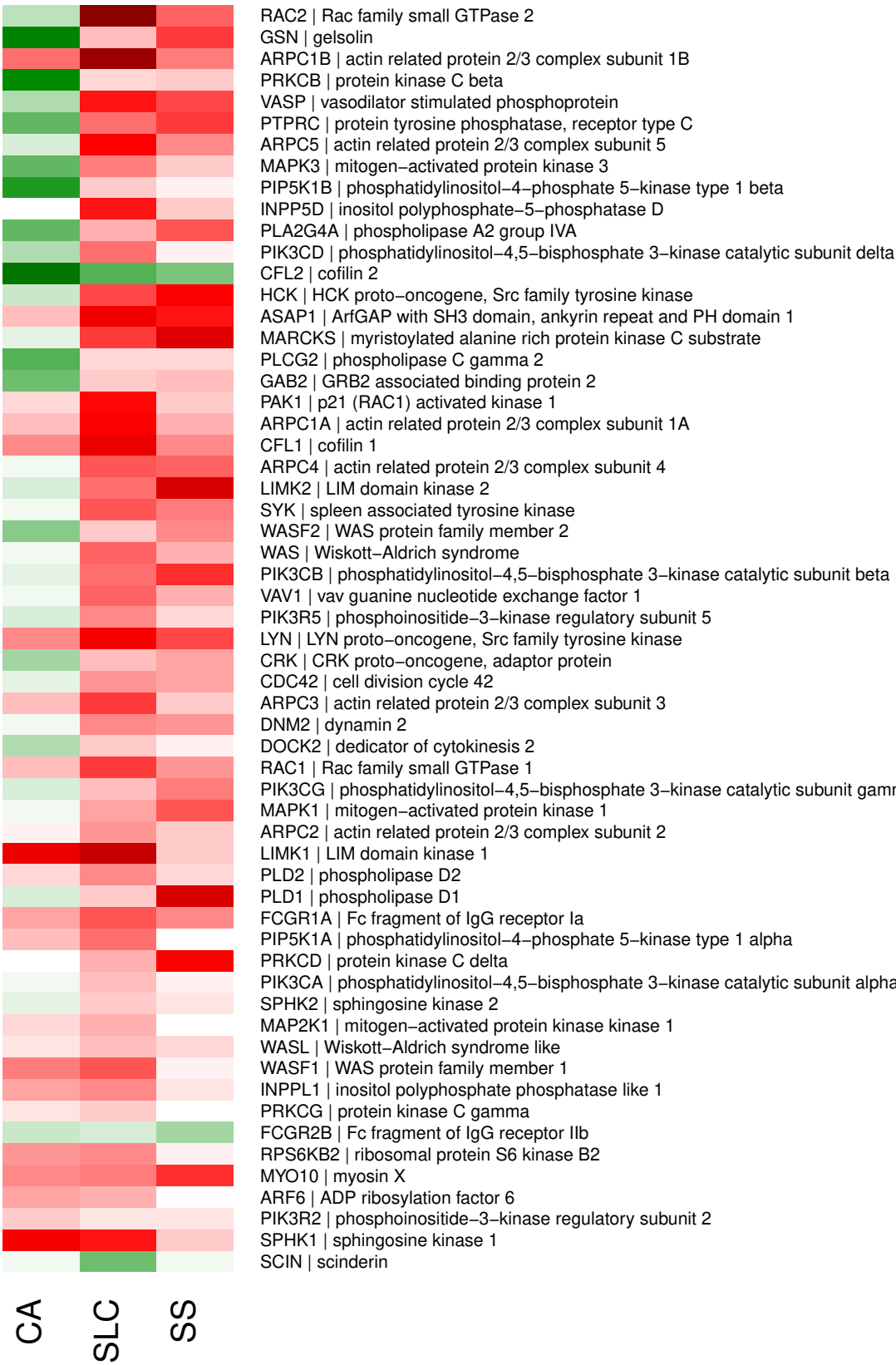
SS

Immune system



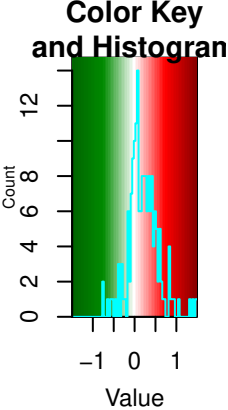
Fc gamma R-mediated phagocytosis

hsa04666



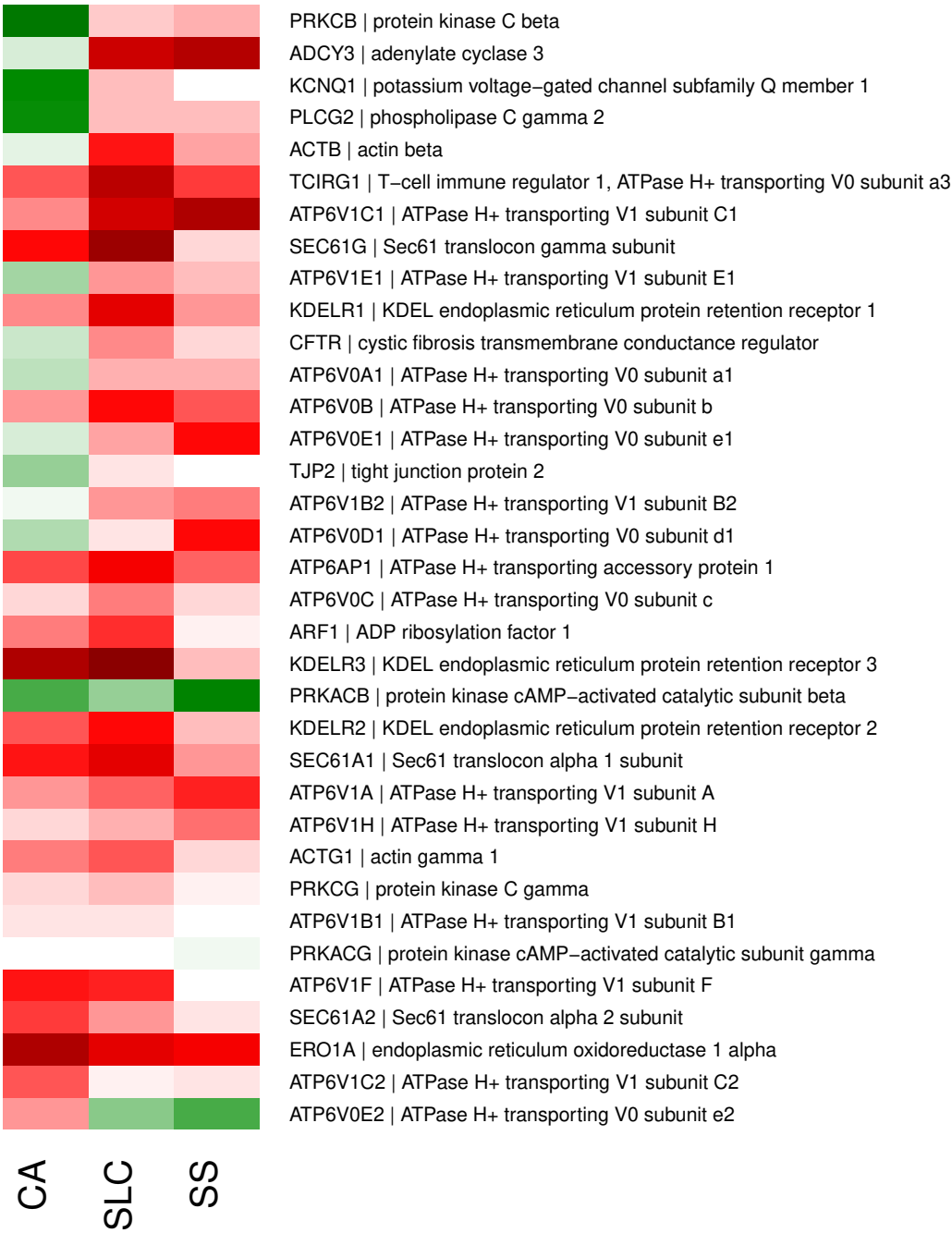
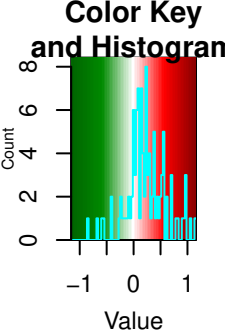
Immune system

Bacterial invasion of epithelial cells
hsa05100



Infectious disease

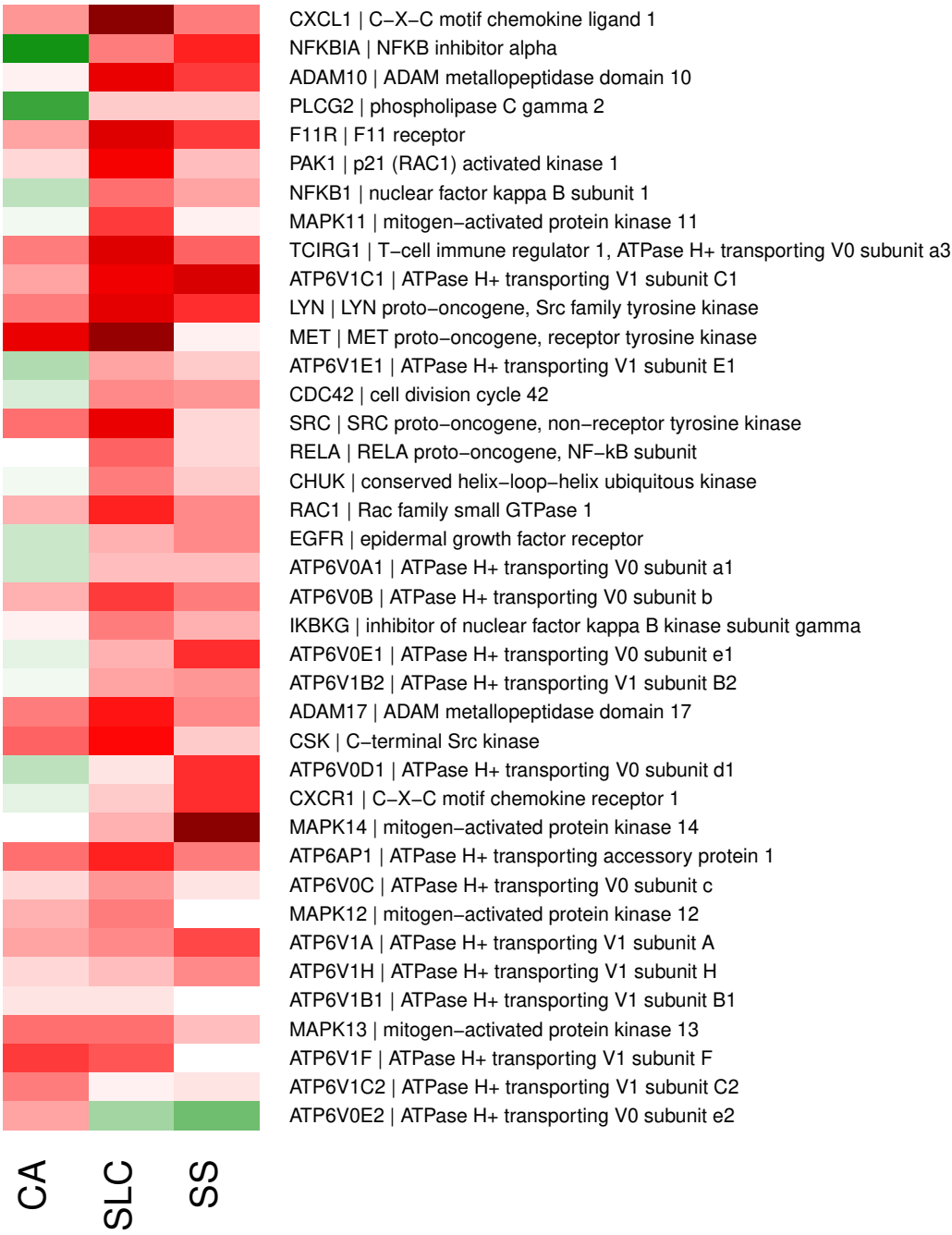
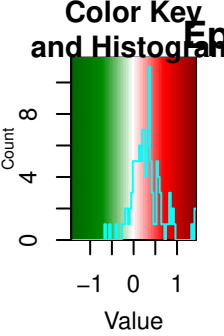
Vibrio cholerae infection
hsa05110



Infectious disease

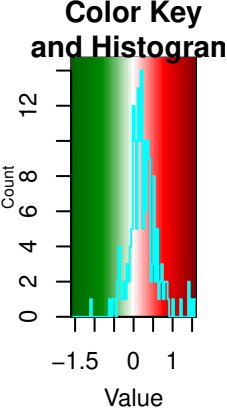
Epithelial cell signaling in *Helicobacter pylori* infection

hsa05120

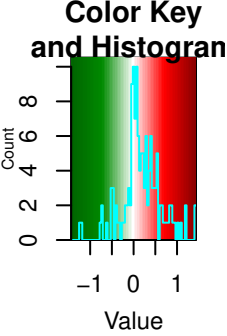


Infectious disease

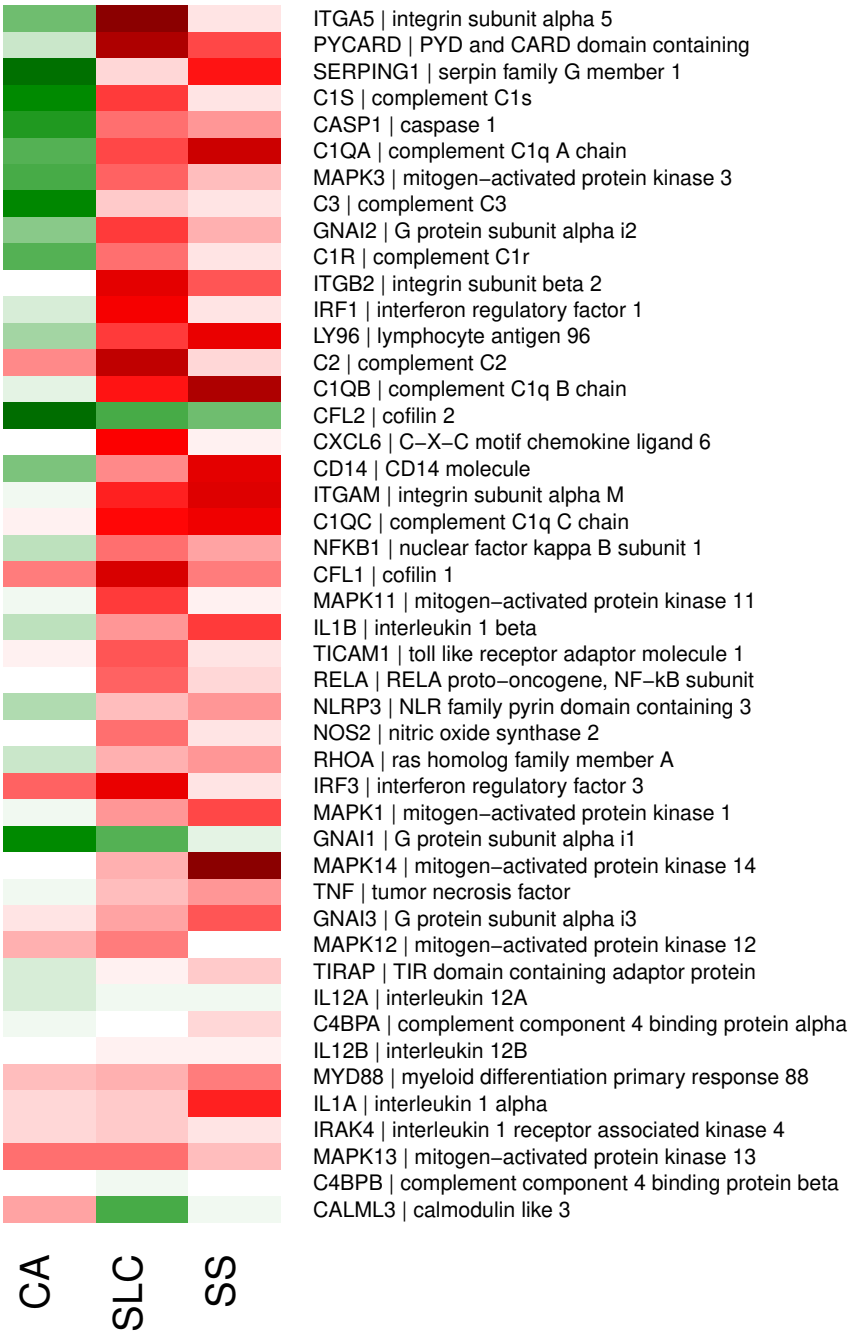
Salmonella infection
hsa05132



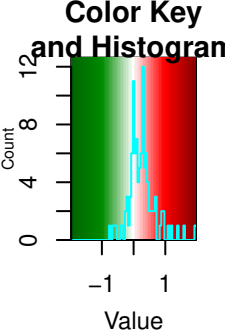
Infectious disease



**Pertussis
hsa05133**



Infectious disease



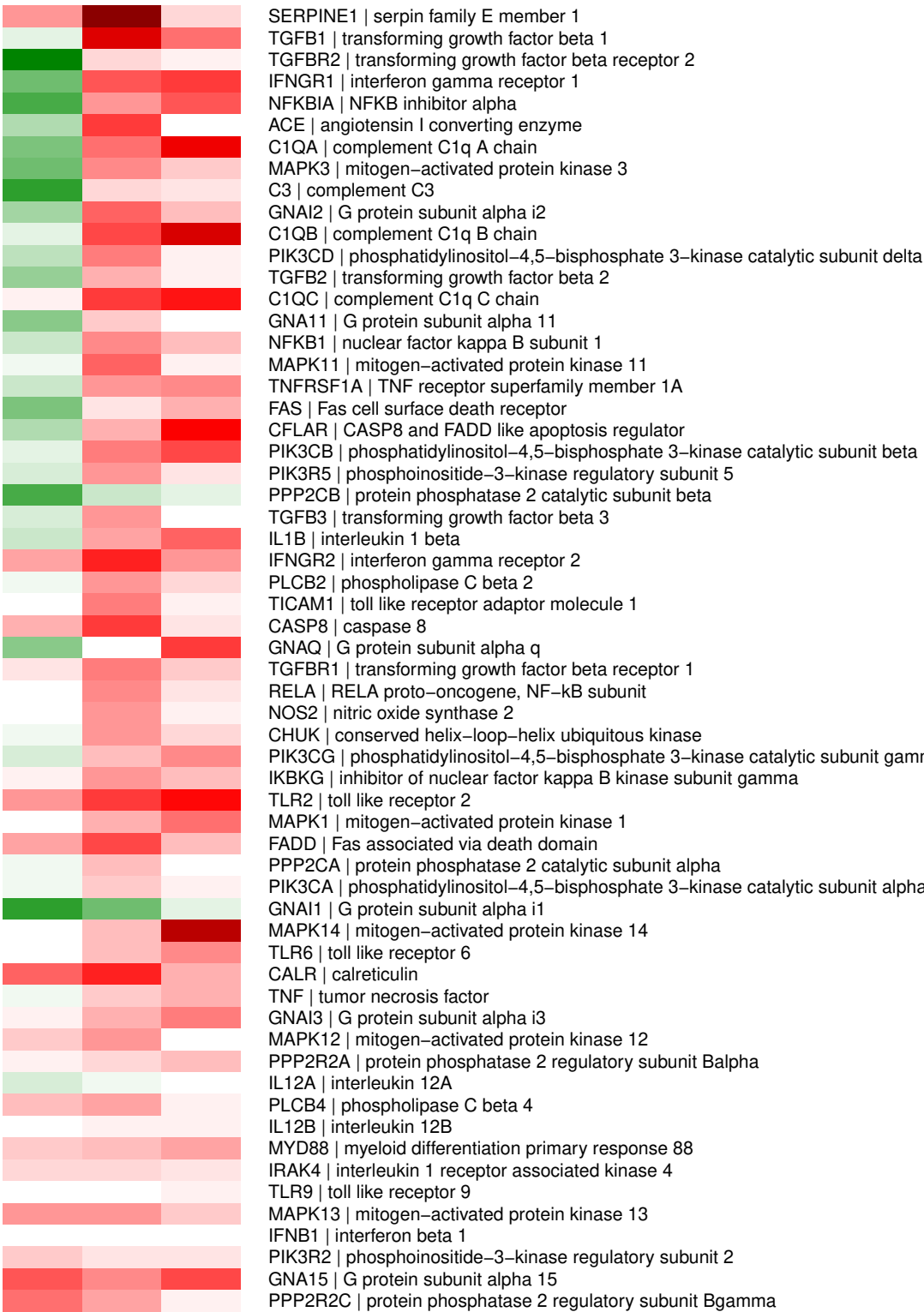
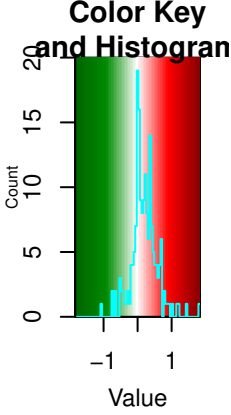
Legionellosis

hsa05134



Infectious disease

Chagas disease (American trypanosomiasis)
hsa05142

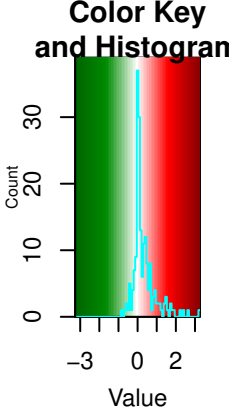


CA

SLC

SS

Infectious disease



Amoebiasis hsa05146

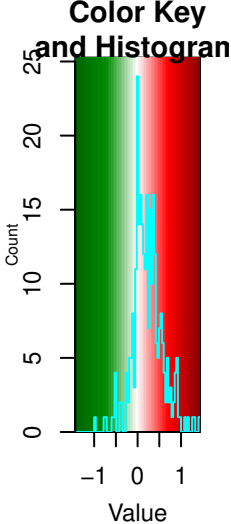


CA

SLC

SS

Infectious disease



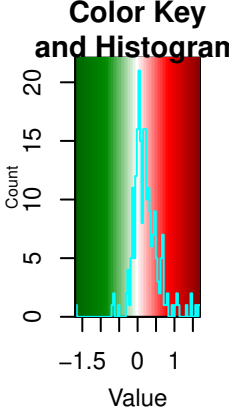
Tuberculosis

hsa05152



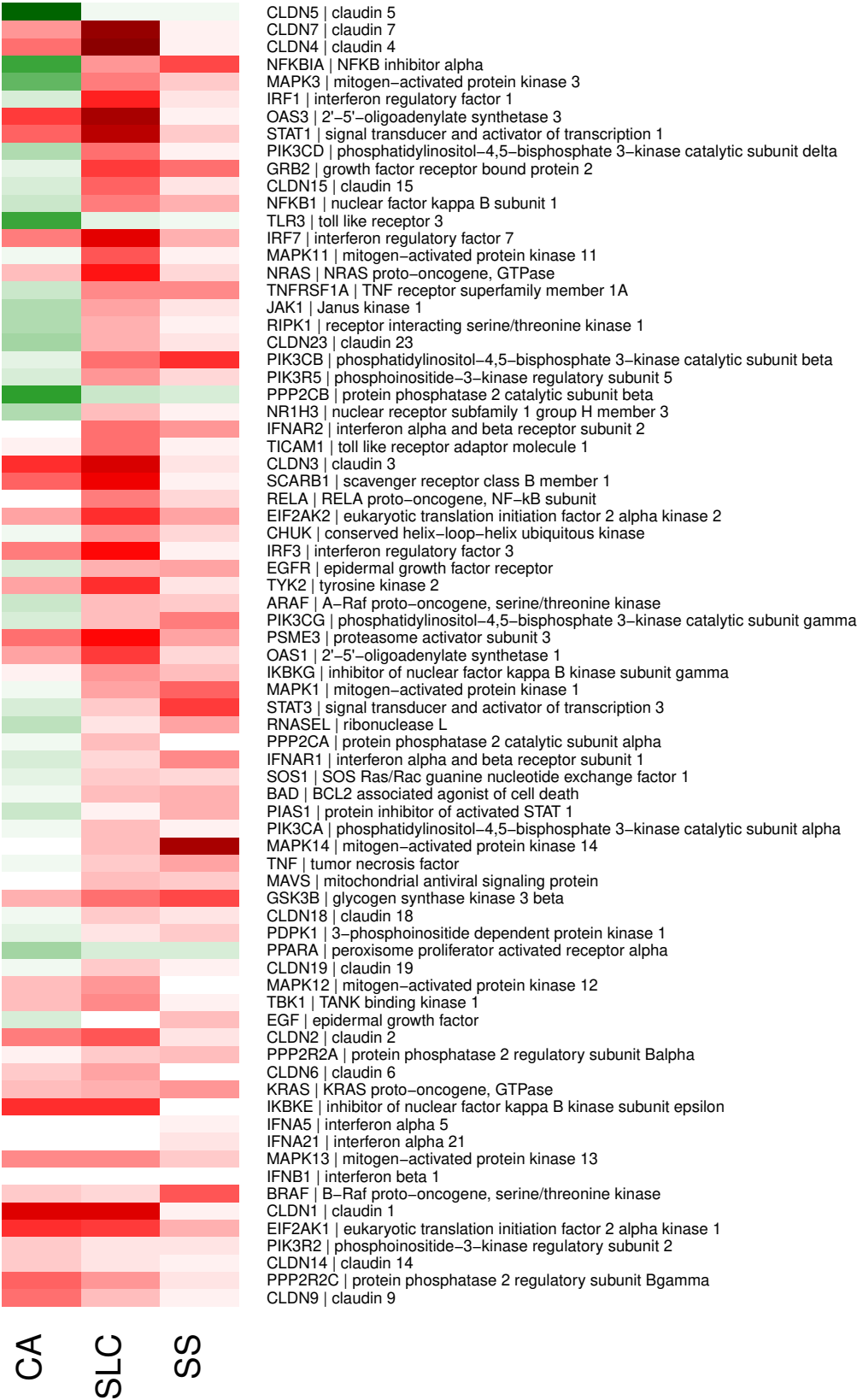
- TGFB1 | transforming growth factor beta 1
- IFNGR1 | interferon gamma receptor 1
- MRC1 | mannose receptor C-type 1
- CEBPB | CCAAT/enhancer binding protein beta
- MAPK3 | mitogen-activated protein kinase 3
- C3 | complement C3
- PLK3 | polo like kinase 3
- ITGB2 | integrin subunit beta 2
- LSP1 | lymphocyte-specific protein 1
- STAT1 | signal transducer and activator of transcription 1
- FCER1G | Fc fragment of IgE receptor Ig
- CORO1A | coronin 1A
- RAB5C | RAB5C, member RAS oncogene family
- BCL2 | BCL2, apoptosis regulator
- CASP10 | caspase 10
- CD14 | CD14 molecule
- TGFB2 | transforming growth factor beta 2
- IL18 | interleukin 18
- ITGAM | integrin subunit alpha M
- CAMK2G | calcium/calmodulin dependent protein kinase II gamma
- NFKB1 | nuclear factor kappa B subunit 1
- BAX | BCL2 associated X, apoptosis regulator
- MAPK11 | mitogen-activated protein kinase 11
- SYK | spleen associated tyrosine kinase
- TNFRSF1A | TNF receptor superfamily member 1A
- JAK1 | Janus kinase 1
- TCIRG1 | T-cell immune regulator 1, ATPase H+ transporting V0 subunit a3
- IL10RB | interleukin 10 receptor subunit beta
- RAB7A | RAB7A, member RAS oncogene family
- TGFB3 | transforming growth factor beta 3
- IL1B | interleukin 1 beta
- CLEC7A | C-type lectin domain containing 7A
- IFNGR2 | interferon gamma receptor 2
- KSR1 | kinase suppressor of ras 1
- APAF1 | apoptotic peptidase activating factor 1
- SRC | SRC proto-oncogene, non-receptor tyrosine kinase
- PPP3CA | protein phosphatase 3 catalytic subunit alpha
- IRAK2 | interleukin 1 receptor associated kinase 2
- CLEC4E | C-type lectin domain family 4 member E
- CASP8 | caspase 8
- BCL10 | B-cell CLL/lymphoma 10
- JAK2 | Janus kinase 2
- VDR | vitamin D receptor
- RELA | RELA proto-oncogene, NF-kB subunit
- EP300 | E1A binding protein p300
- NOS2 | nitric oxide synthase 2
- RHOA | ras homolog family member A
- ITGAX | integrin subunit alpha X
- TLR1 | toll like receptor 1
- FCGR3B | Fc fragment of IgG receptor IIIb
- ATP6V0A1 | ATPase H+ transporting V0 subunit a1
- ATP6V0B | ATPase H+ transporting V0 subunit b
- CEBPG | CCAAT/enhancer binding protein gamma
- TLR2 | toll like receptor 2
- MAPK1 | mitogen-activated protein kinase 1
- FADD | Fas associated via death domain
- BAD | BCL2 associated agonist of cell death
- FCGR1A | Fc fragment of IgG receptor Ia
- ARHGEF12 | Rho guanine nucleotide exchange factor 12
- ATP6V0D1 | ATPase H+ transporting V0 subunit d1
- CTSD | cathepsin D
- PPP3R1 | protein phosphatase 3 regulatory subunit B, alpha
- SPHK2 | sphingosine kinase 2
- MAPK14 | mitogen-activated protein kinase 14
- LAMP2 | lysosomal associated membrane protein 2
- TLR6 | toll like receptor 6
- RFXANK | regulatory factor X associated ankyrin containing protein
- TNF | tumor necrosis factor
- ATP6AP1 | ATPase H+ transporting accessory protein 1
- LAMP1 | lysosomal associated membrane protein 1
- CREBBP | CREB binding protein
- ATP6V0C | ATPase H+ transporting V0 subunit c
- NFYC | nuclear transcription factor Y subunit gamma
- CAMP | cathelicidin antimicrobial peptide
- MAPK12 | mitogen-activated protein kinase 12
- TIRAP | TIR domain containing adaptor protein
- BID | BH3 interacting domain death agonist
- IL12A | interleukin 12A
- ATP6V1H | ATPase H+ transporting V1 subunit H
- FCGR2B | Fc fragment of IgG receptor IIb
- IL12B | interleukin 12B
- RAB5A | RAB5A, member RAS oncogene family
- MYD88 | myeloid differentiation primary response 88
- IL1A | interleukin 1 alpha
- IRAK4 | interleukin 1 receptor associated kinase 4
- TLR9 | toll like receptor 9
- IFNA5 | interferon alpha 5
- PPP3R2 | protein phosphatase 3 regulatory subunit B, beta
- IFNA21 | interferon alpha 21
- MAPK13 | mitogen-activated protein kinase 13
- IFNB1 | interferon beta 1
- LBP | lipopolysaccharide binding protein
- NOD2 | nucleotide binding oligomerization domain containing 2
- SPHK1 | sphingosine kinase 1
- CALML3 | calmodulin like 3

Infectious disease

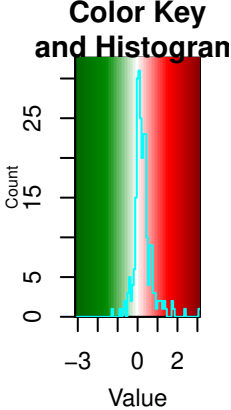


Hepatitis C

hsa05160

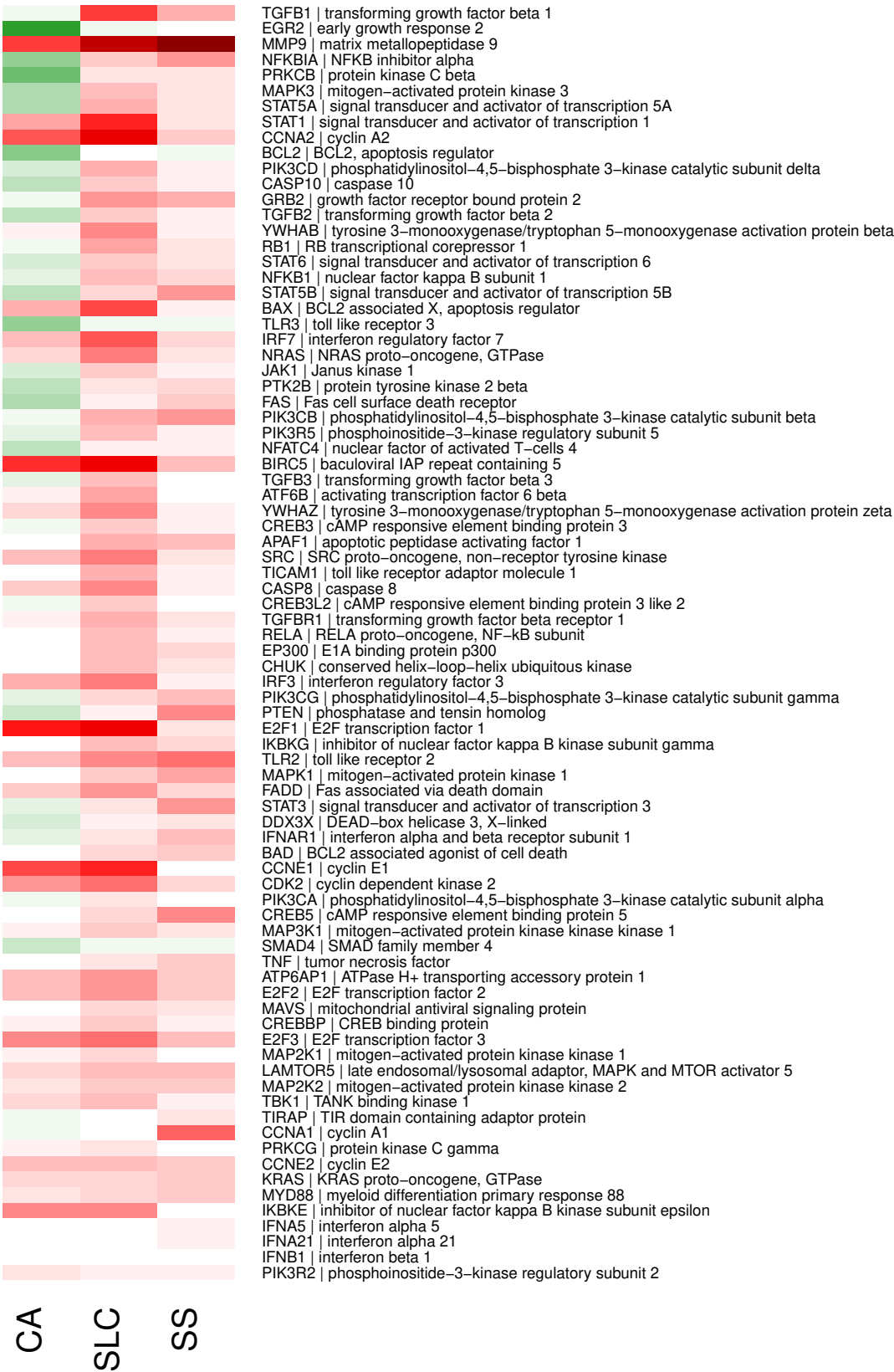


Infectious disease

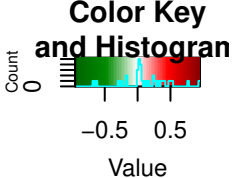


Hepatitis B

hsa05161

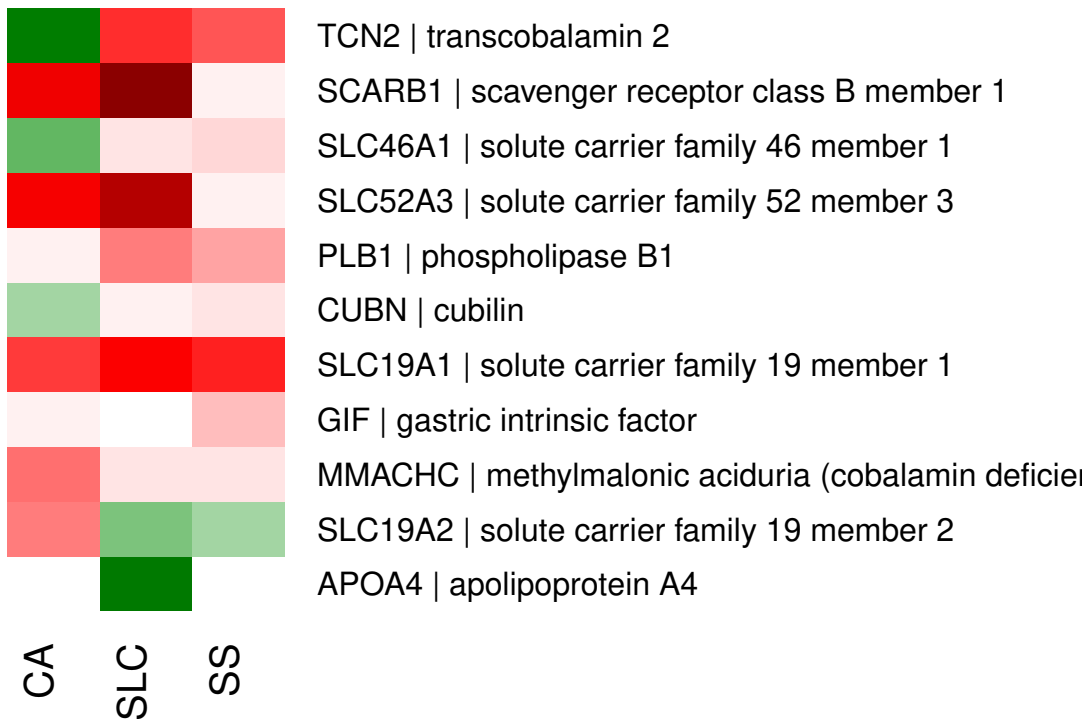


Infectious disease

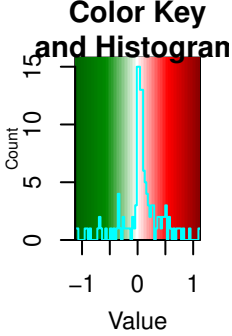


Vitamin digestion and absorption

hsa04977



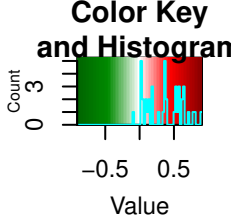
Other



Morphine addiction hsa05032

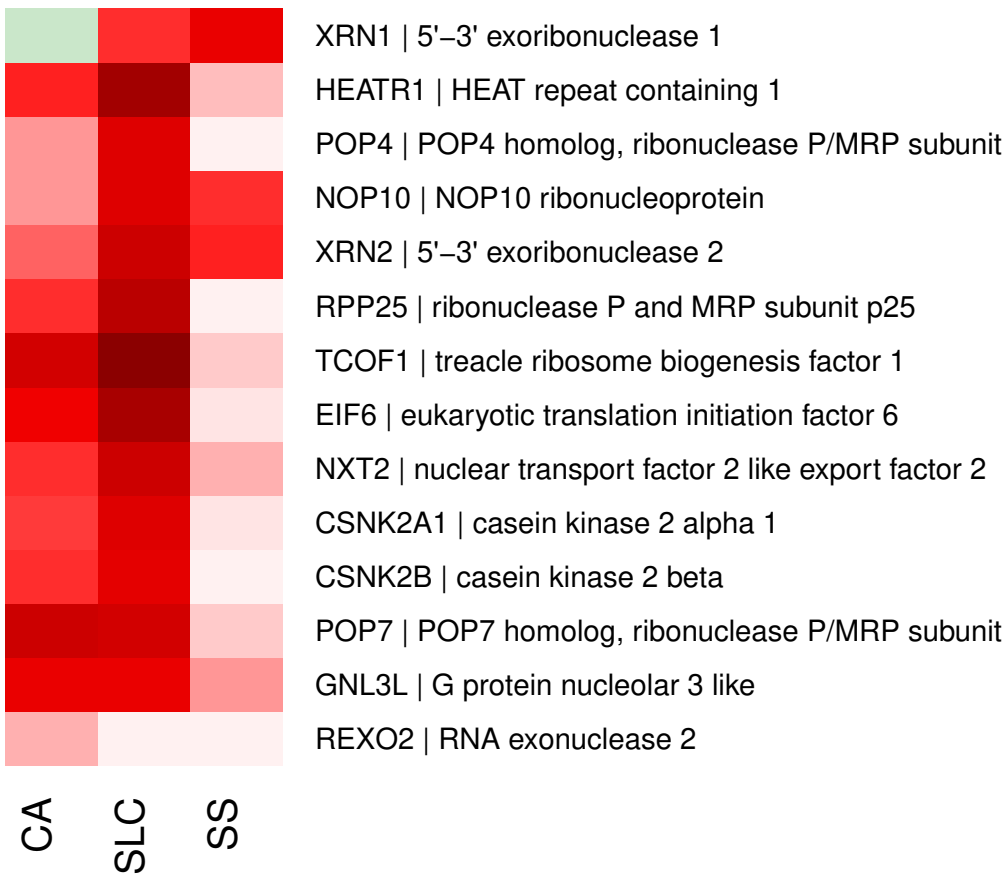


Other

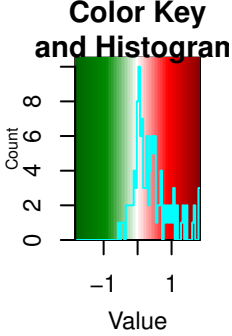


Ribosome biogenesis in eukaryotes

hsa03008



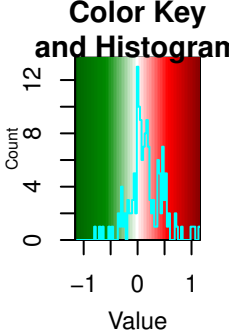
Other



p53 signaling pathway hsa04115

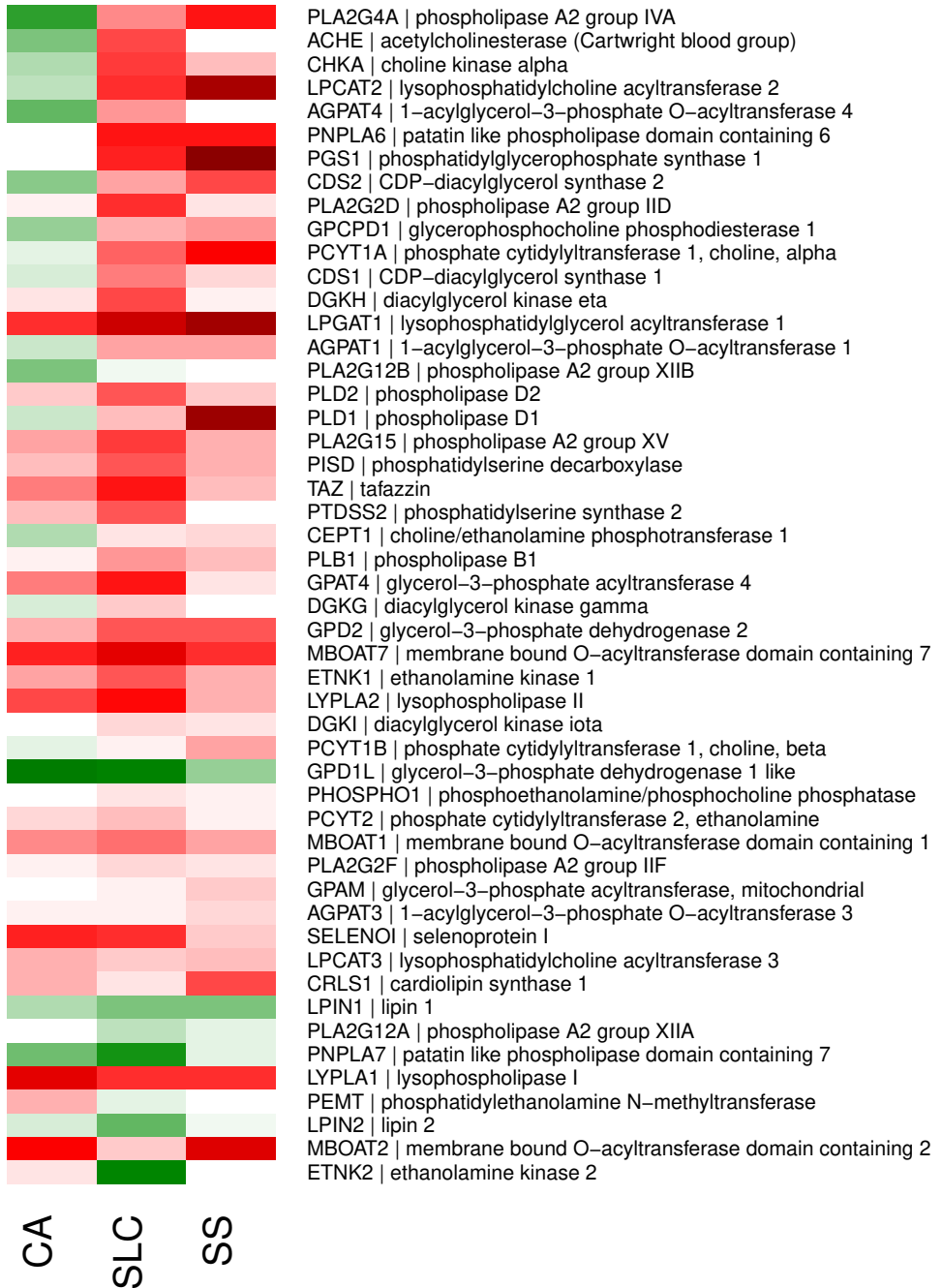


Other

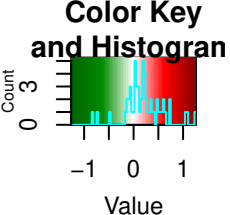


Glycerophospholipid metabolism

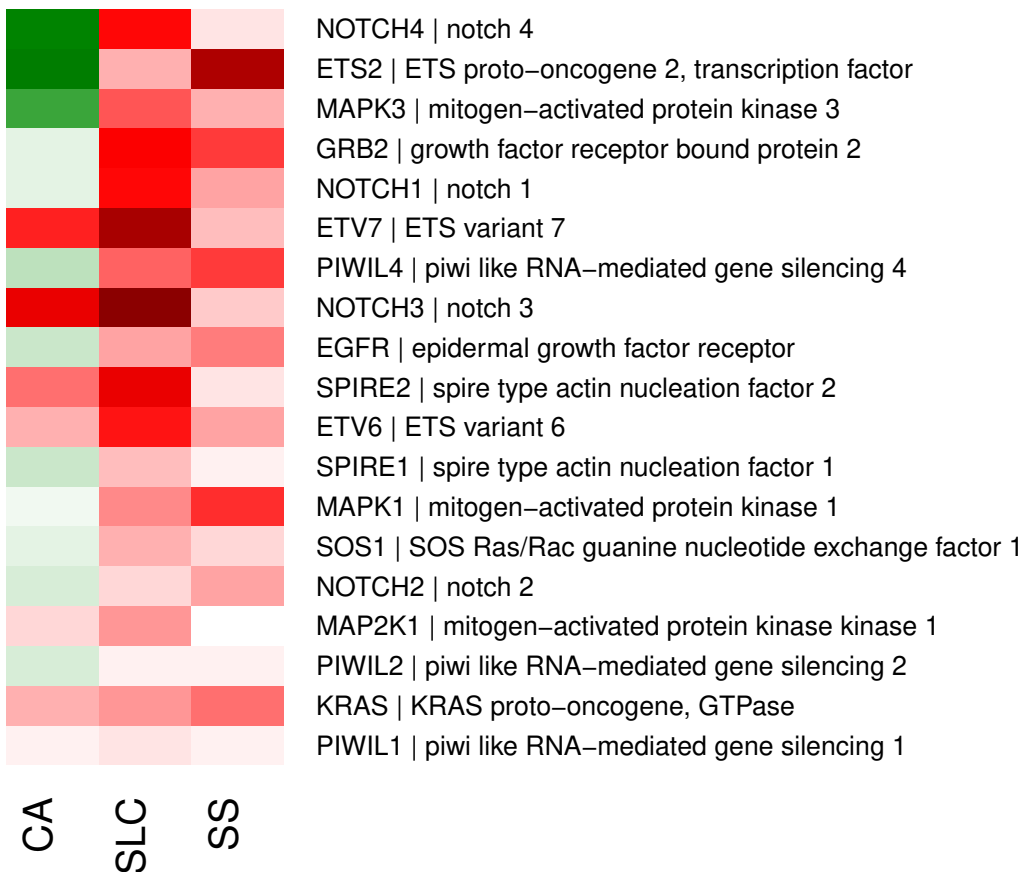
hsa00564



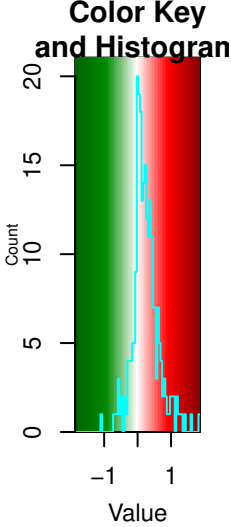
Other



Dorso-ventral axis formation hsa04320

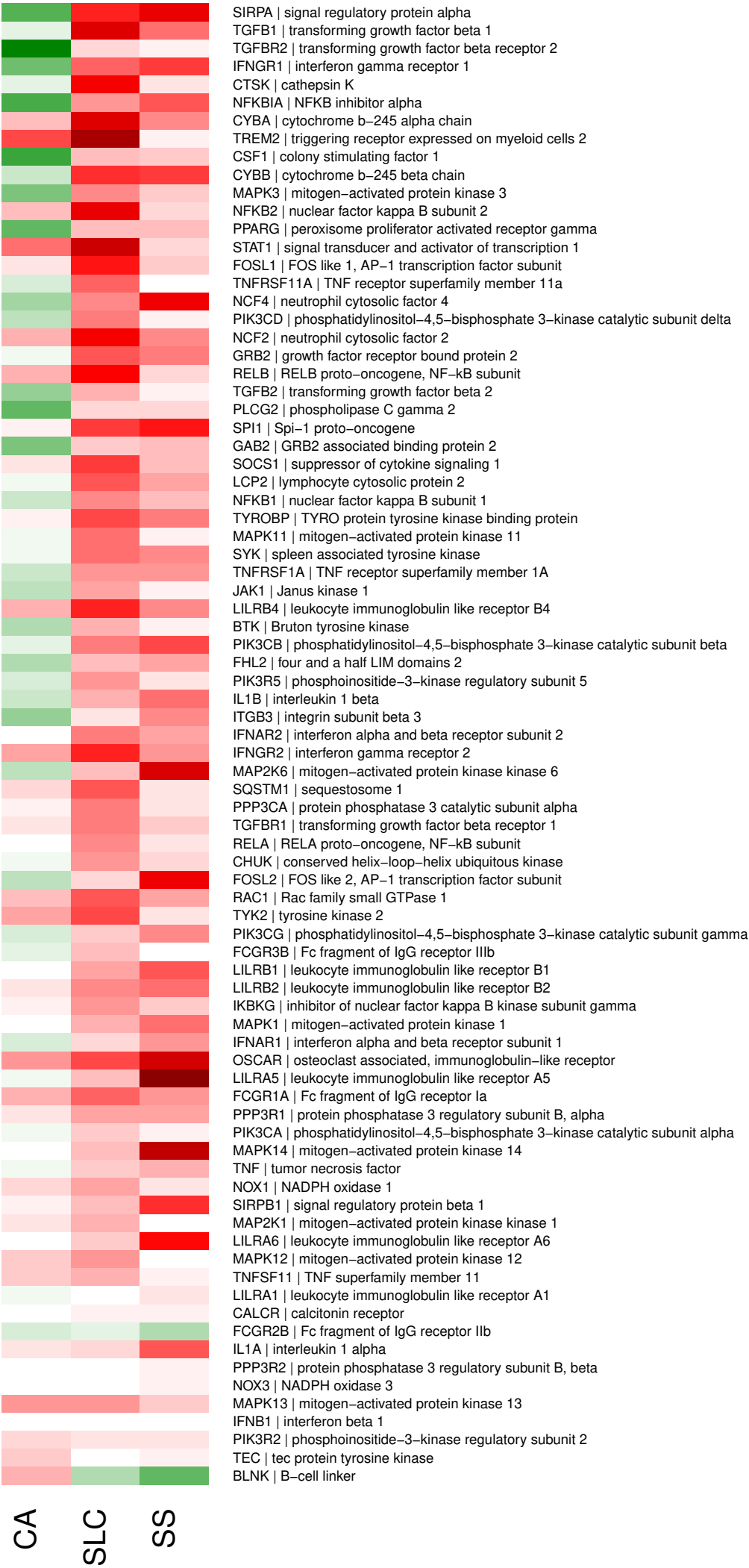


Other

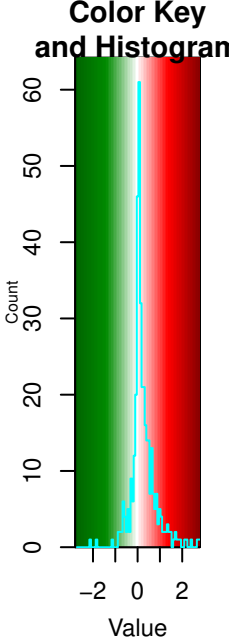


Osteoclast differentiation

hsa04380



Other

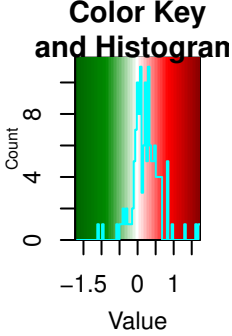


Focal adhesion

hsa04510



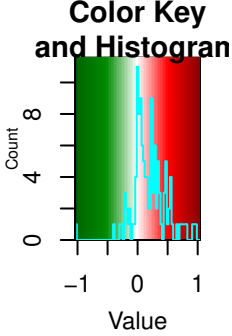
Other



Adherens junction hsa04520

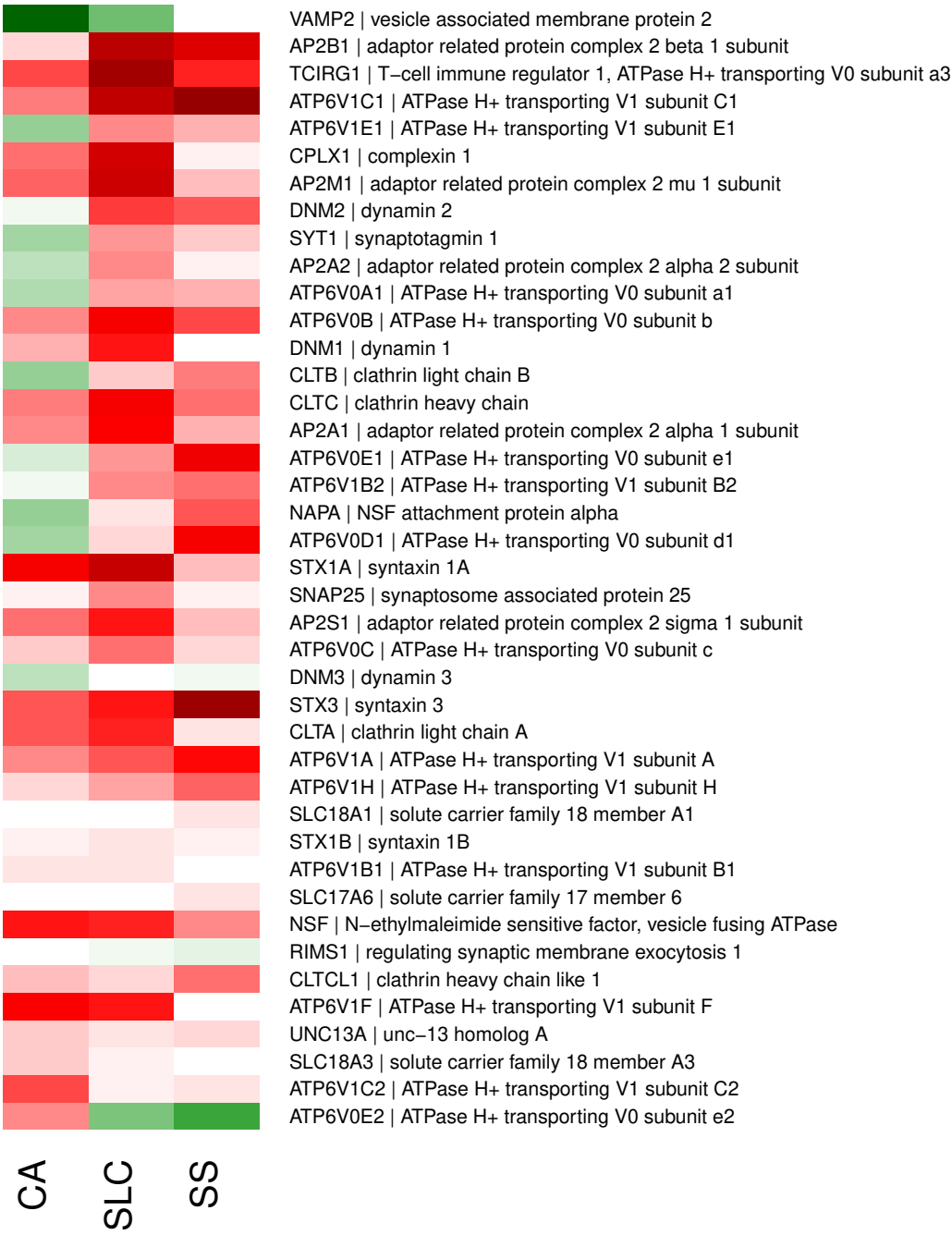


Other



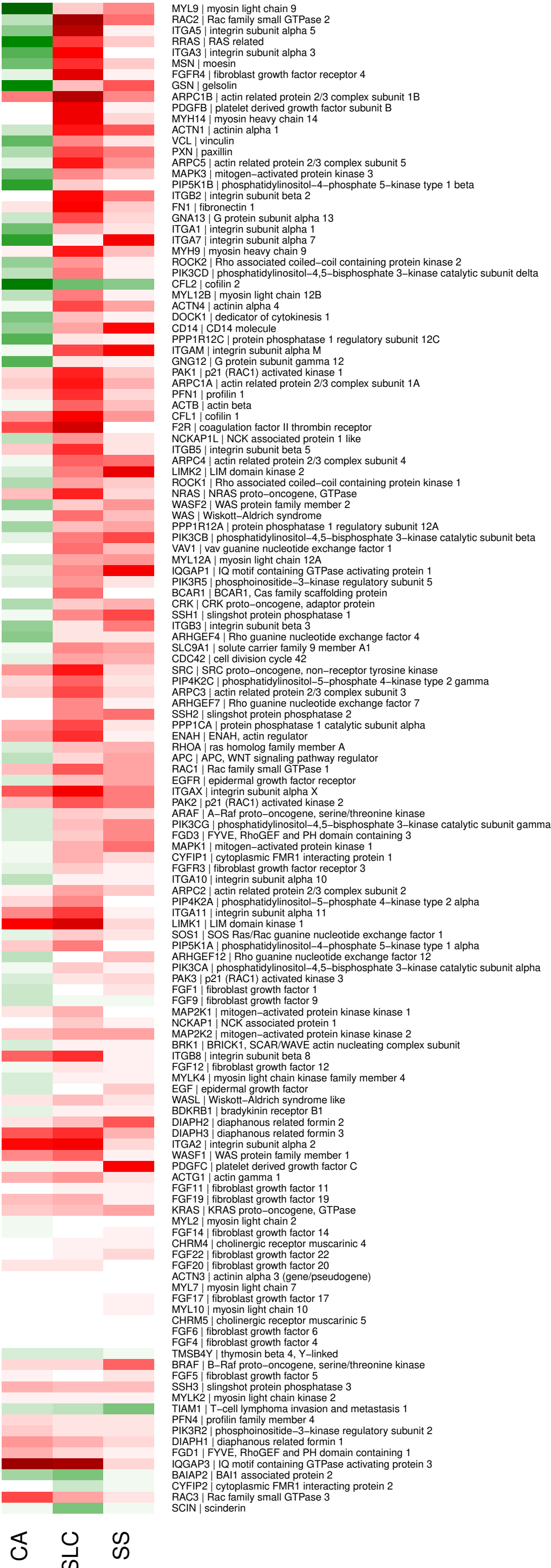
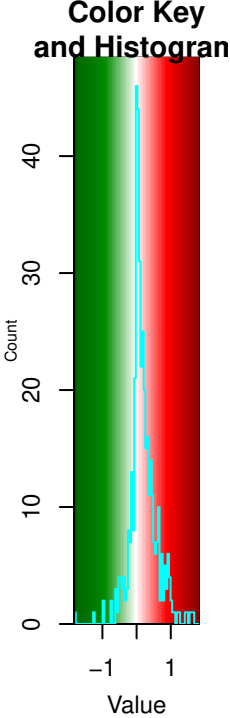
Synaptic vesicle cycle

hsa04721



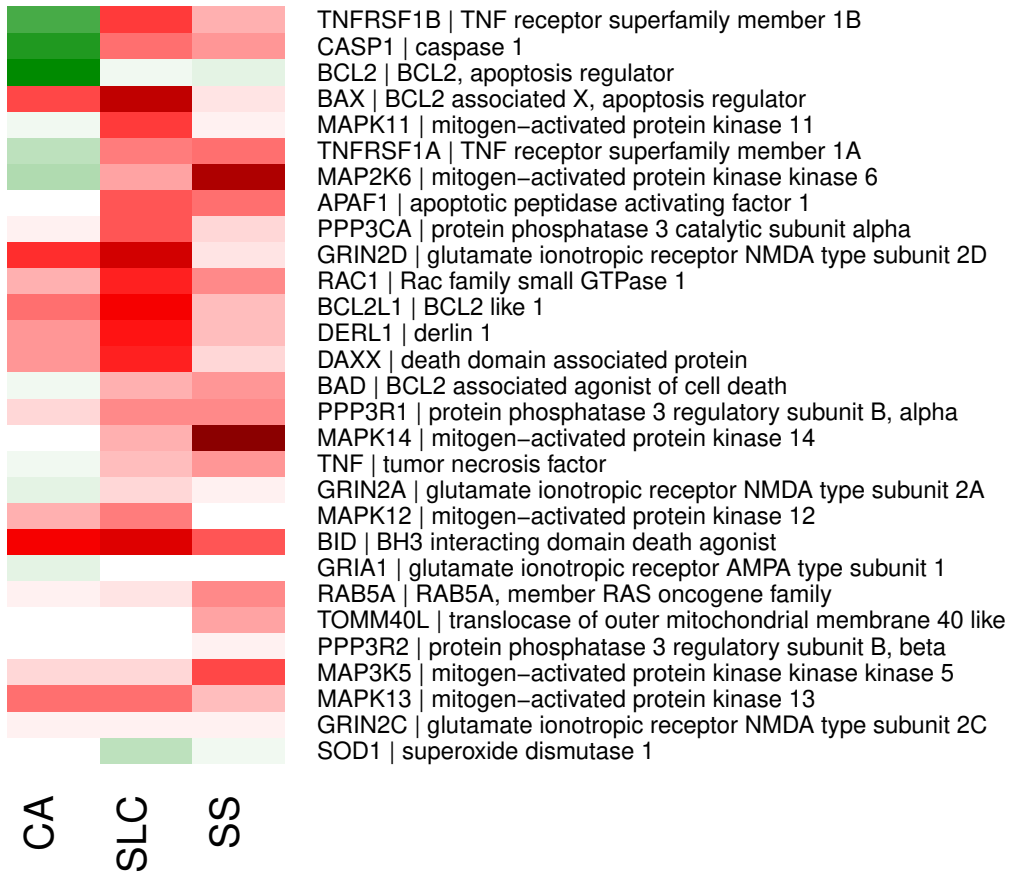
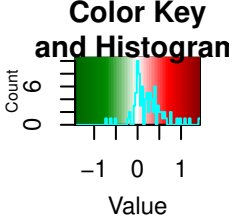
Other

Regulation of actin cytoskeleton
hsa04810

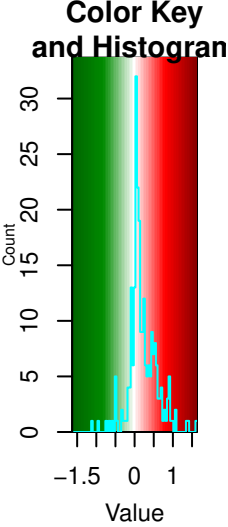


Other

Amyotrophic lateral sclerosis (ALS)
hsa05014

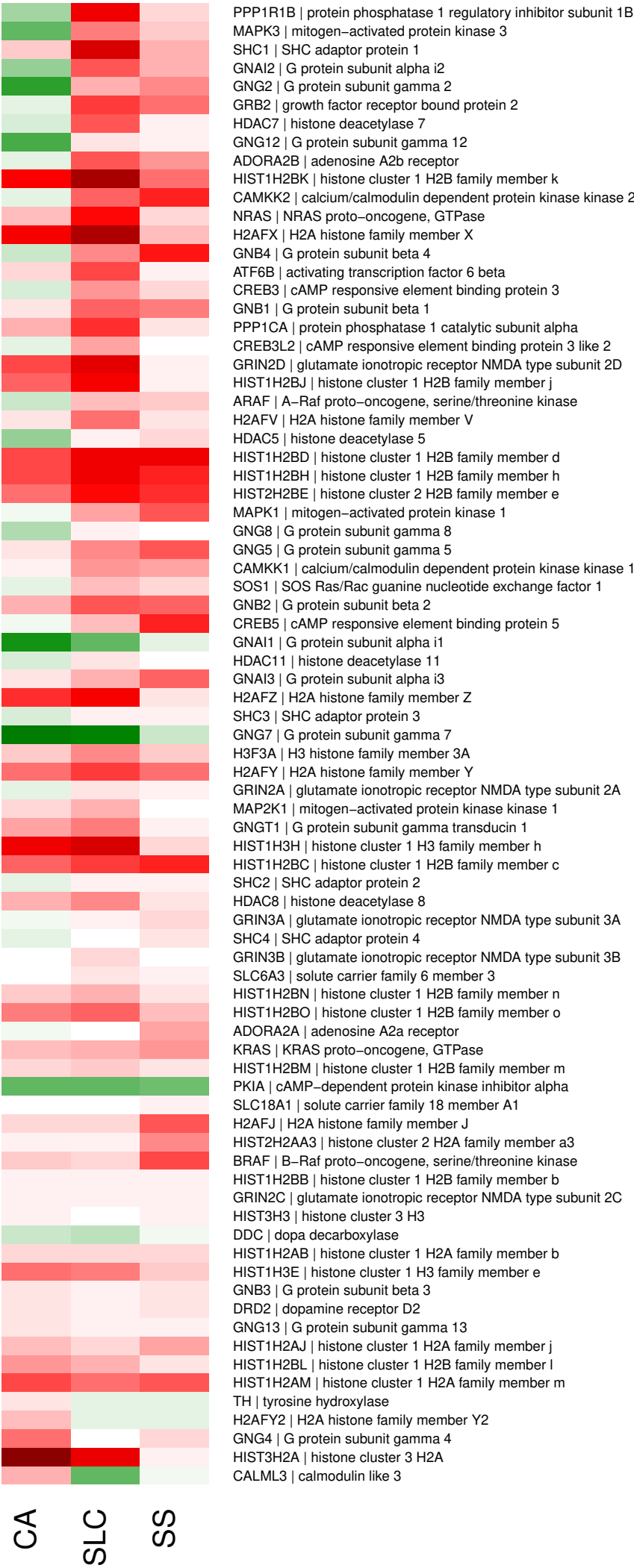


Other



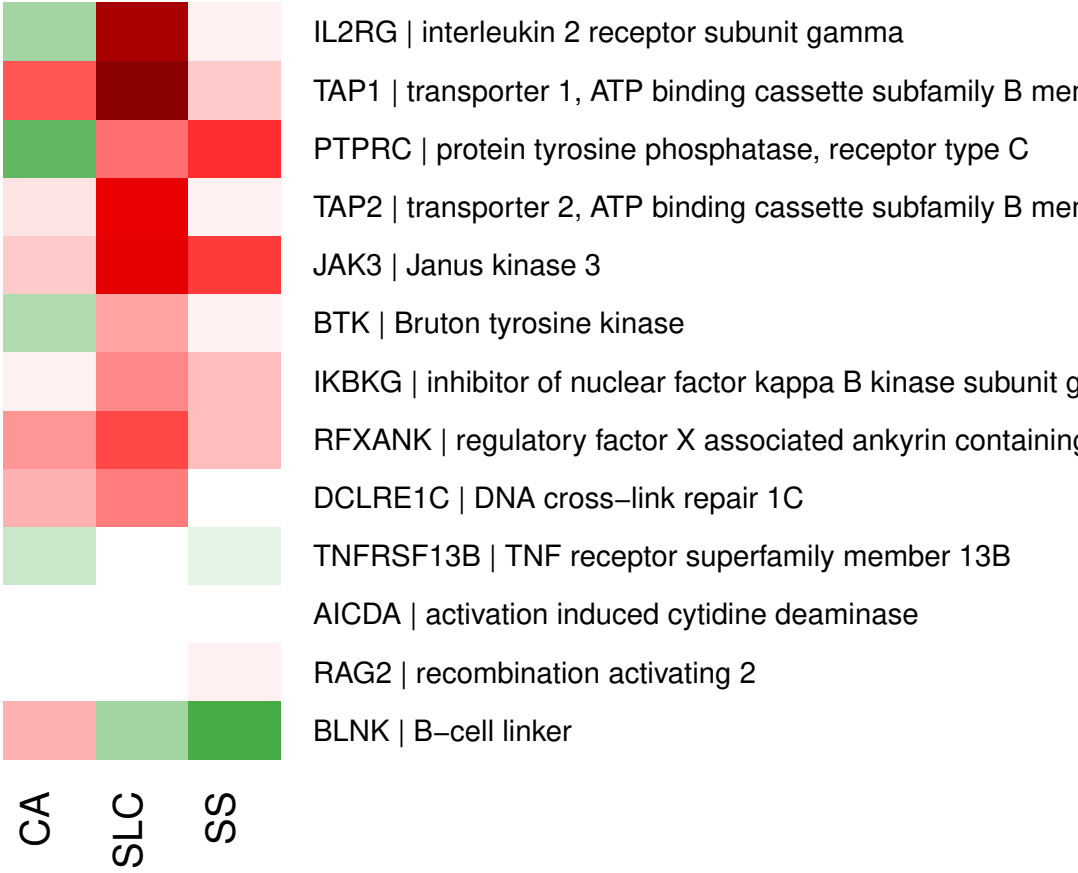
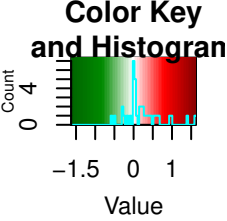
Alcoholism

hsa05034



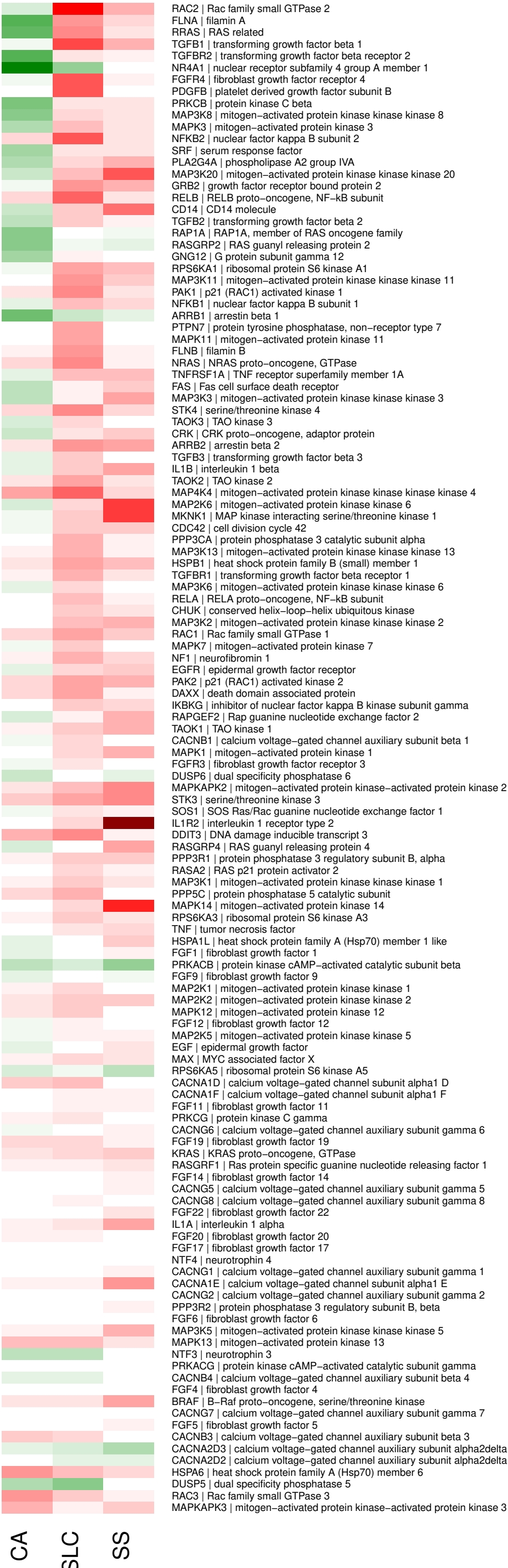
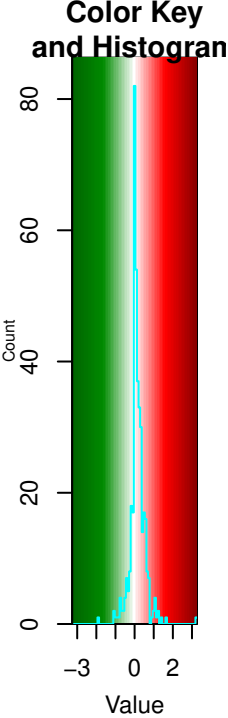
Other

Primary immunodeficiency
hsa05340



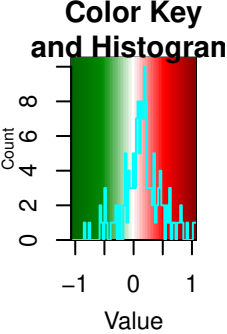
Other

MAPK signaling pathway
hsa04010



Signal transduction

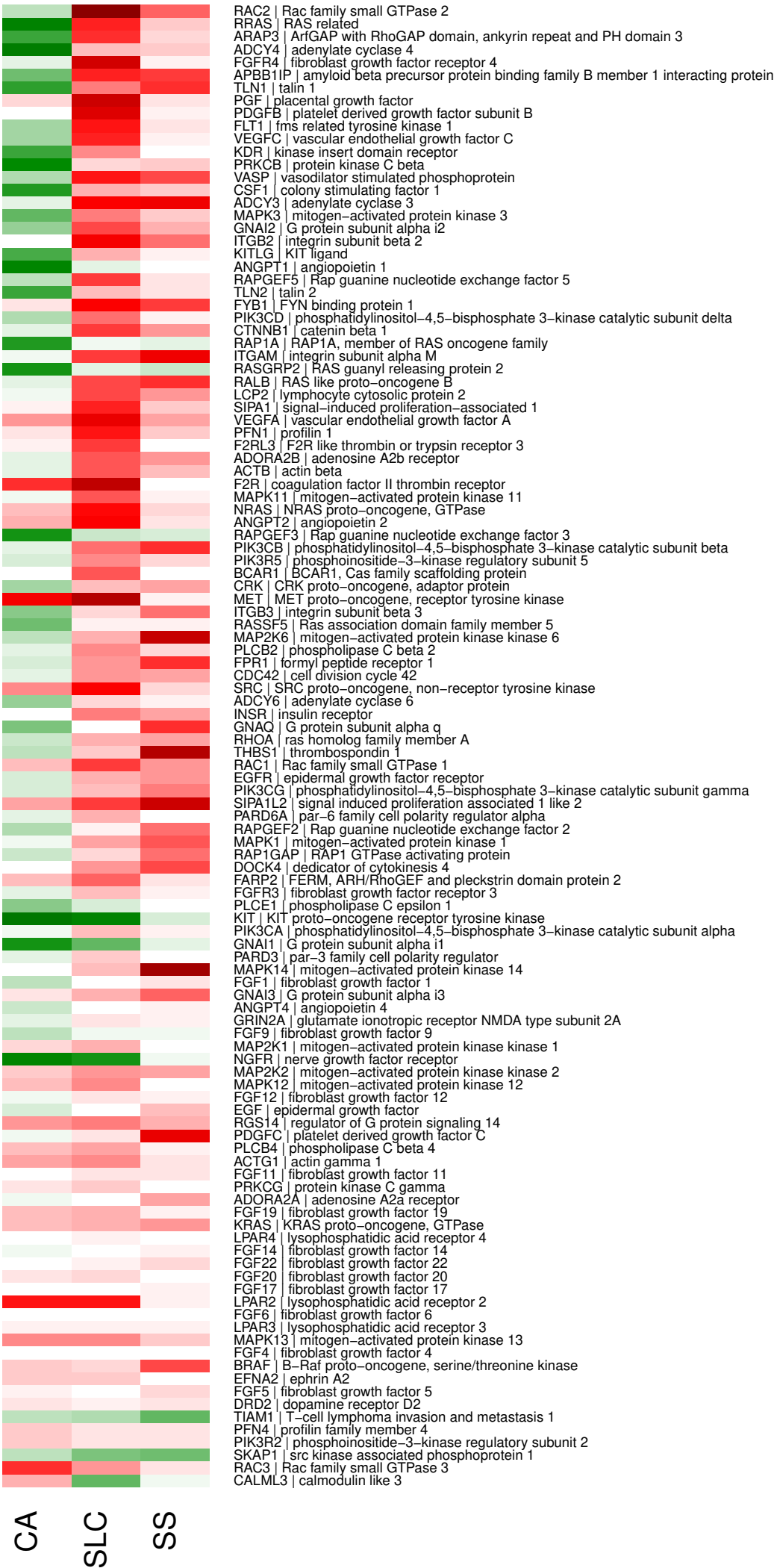
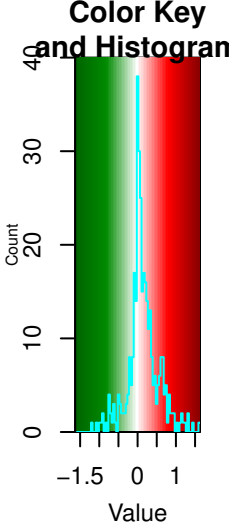
ErbB signaling pathway
hsa04012



Signal transduction

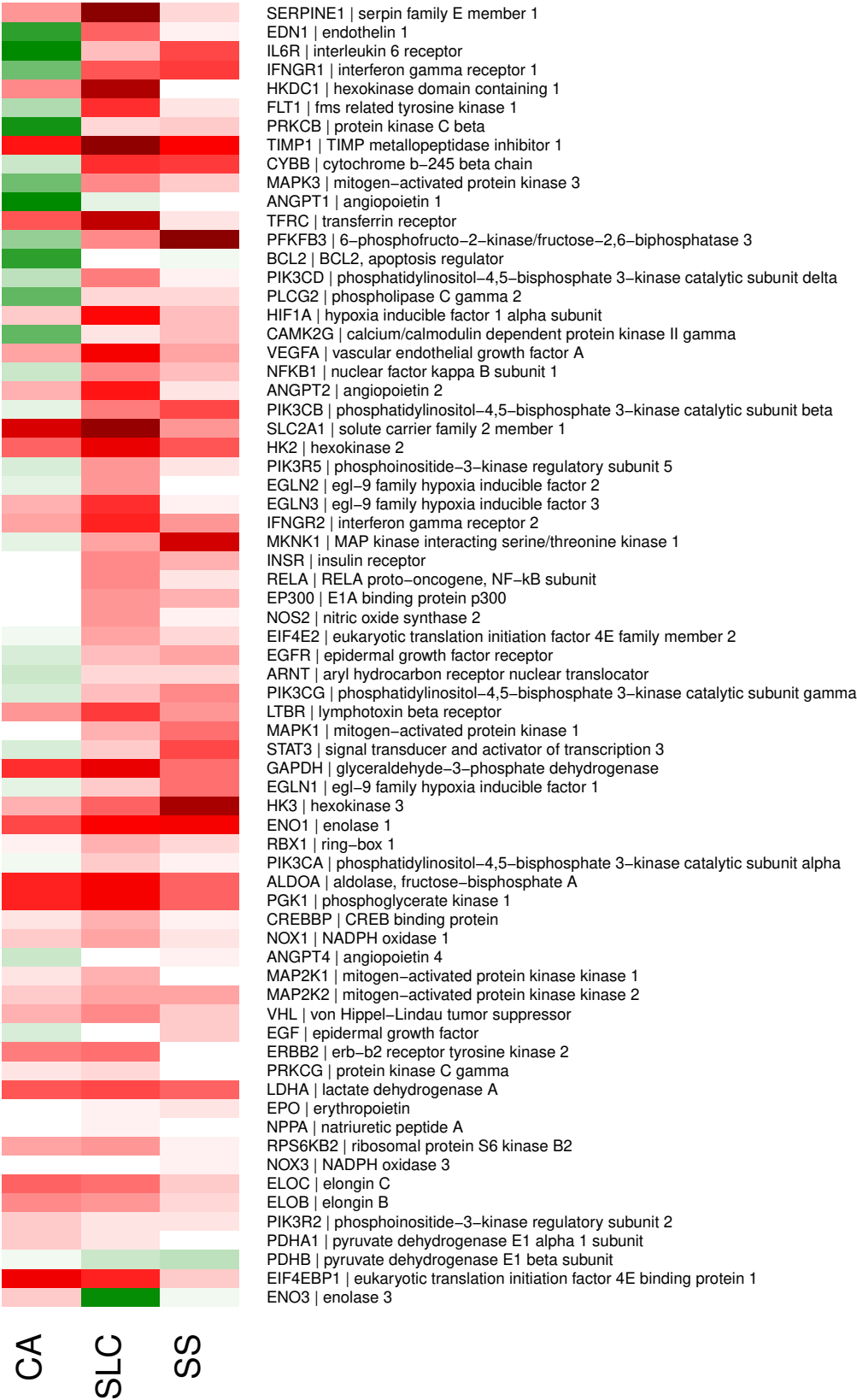
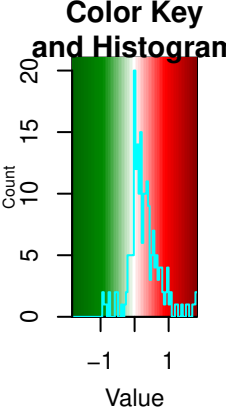
Rap1 signaling pathway

hsa04015

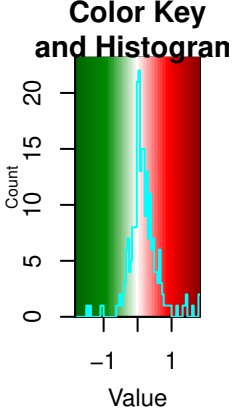


Signal transduction

HIF-1 signaling pathway
hsa04066

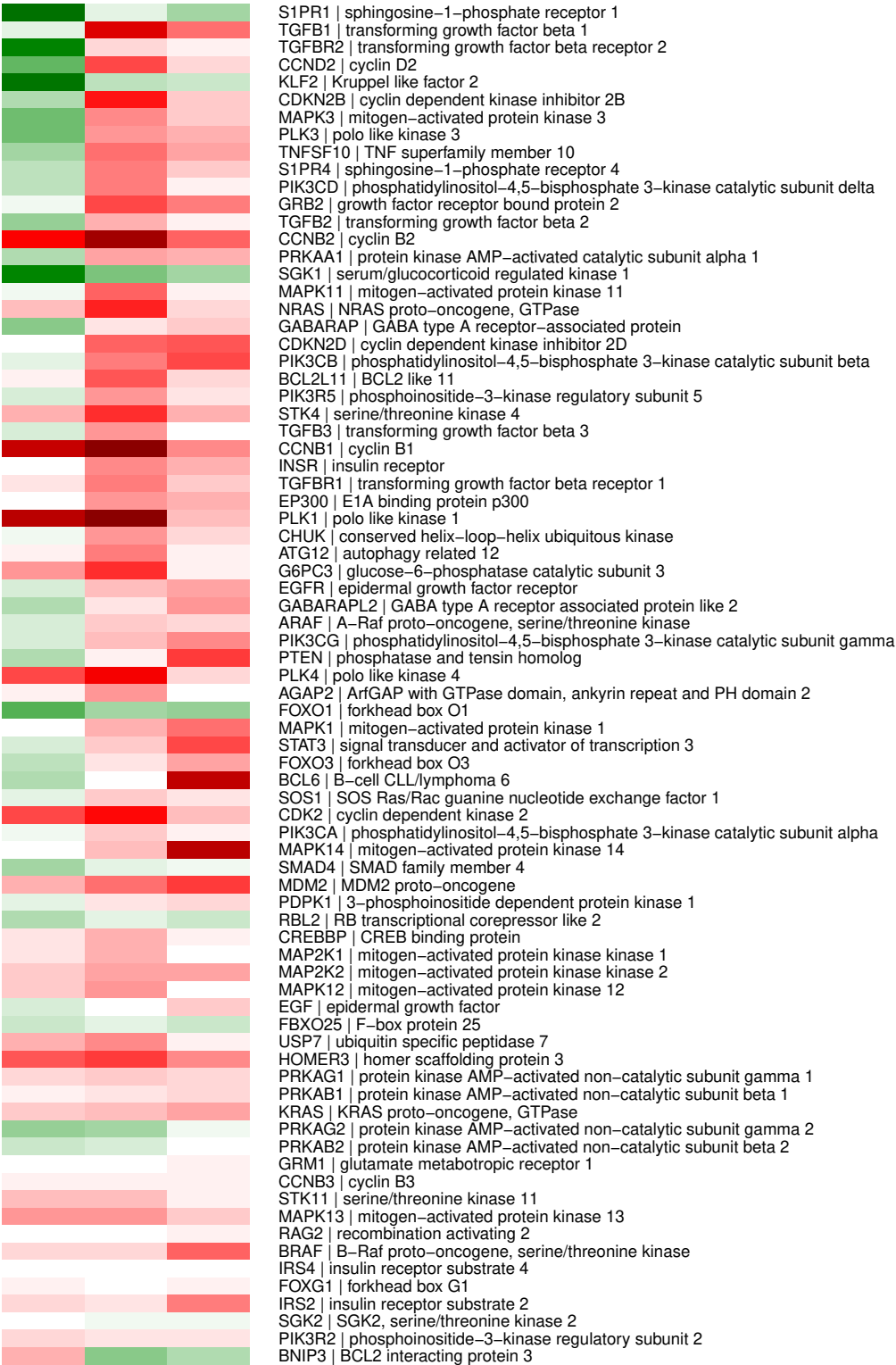


Signal transduction



FoxO signaling pathway

hsa04068



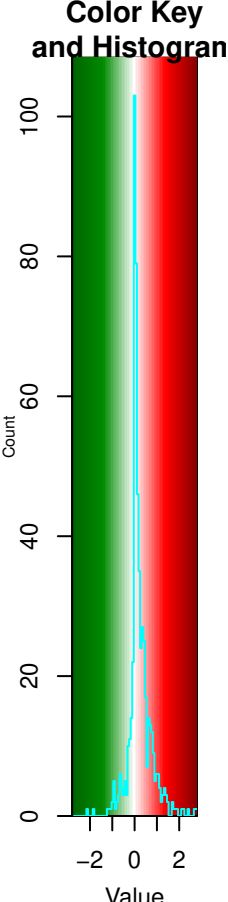
CA

SLC

SS

Signal transduction

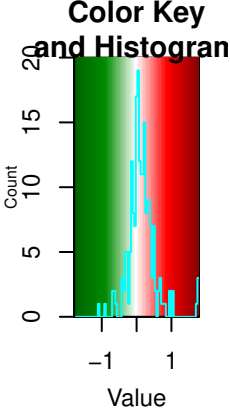
PI3K–Akt signaling pathway
hsa04151



Signal transduction

AMPK signaling pathway

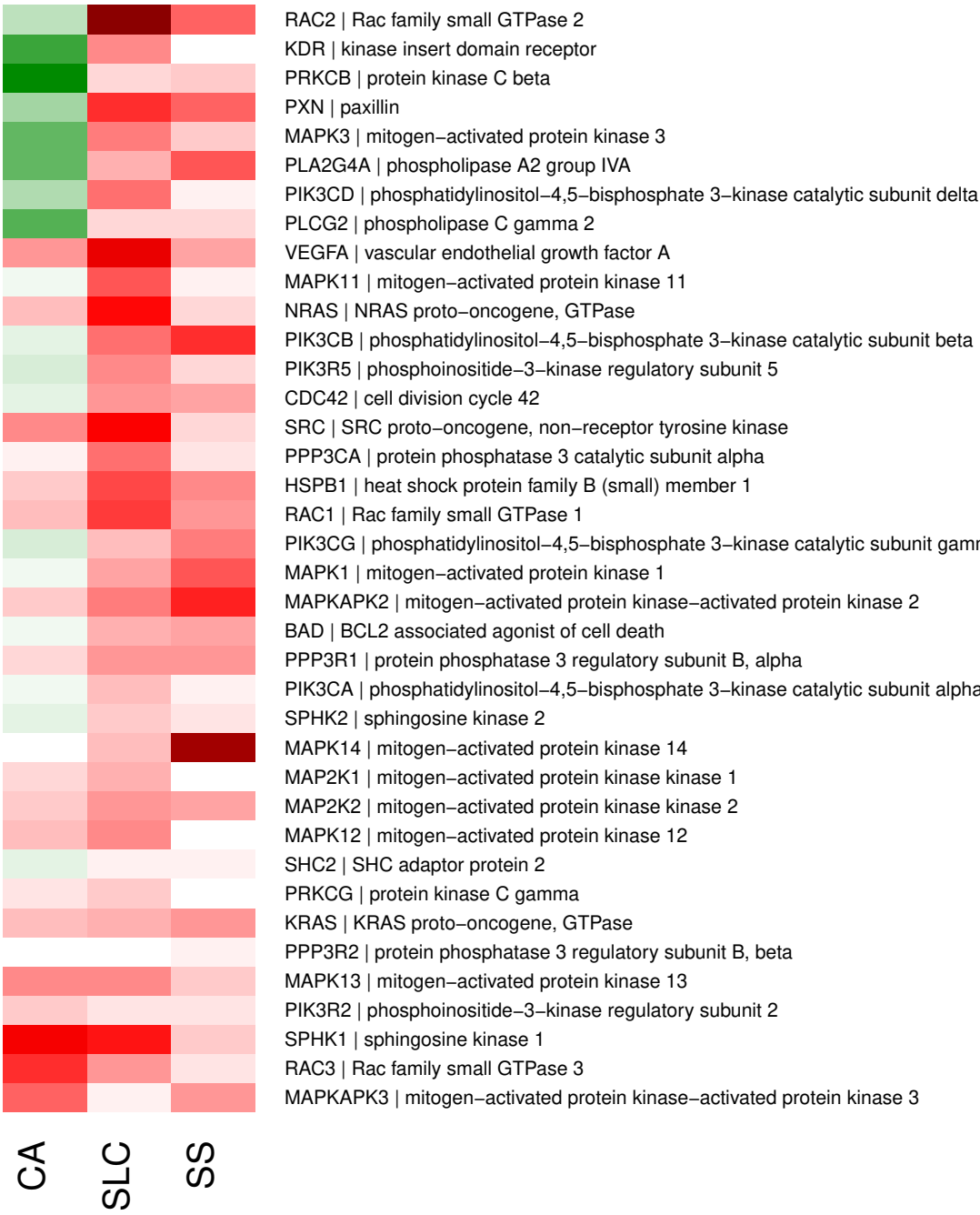
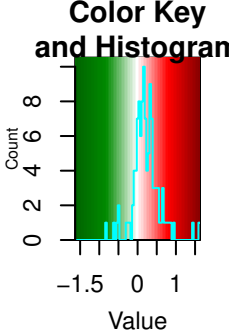
hsa04152



Signal transduction

VEGF signaling pathway

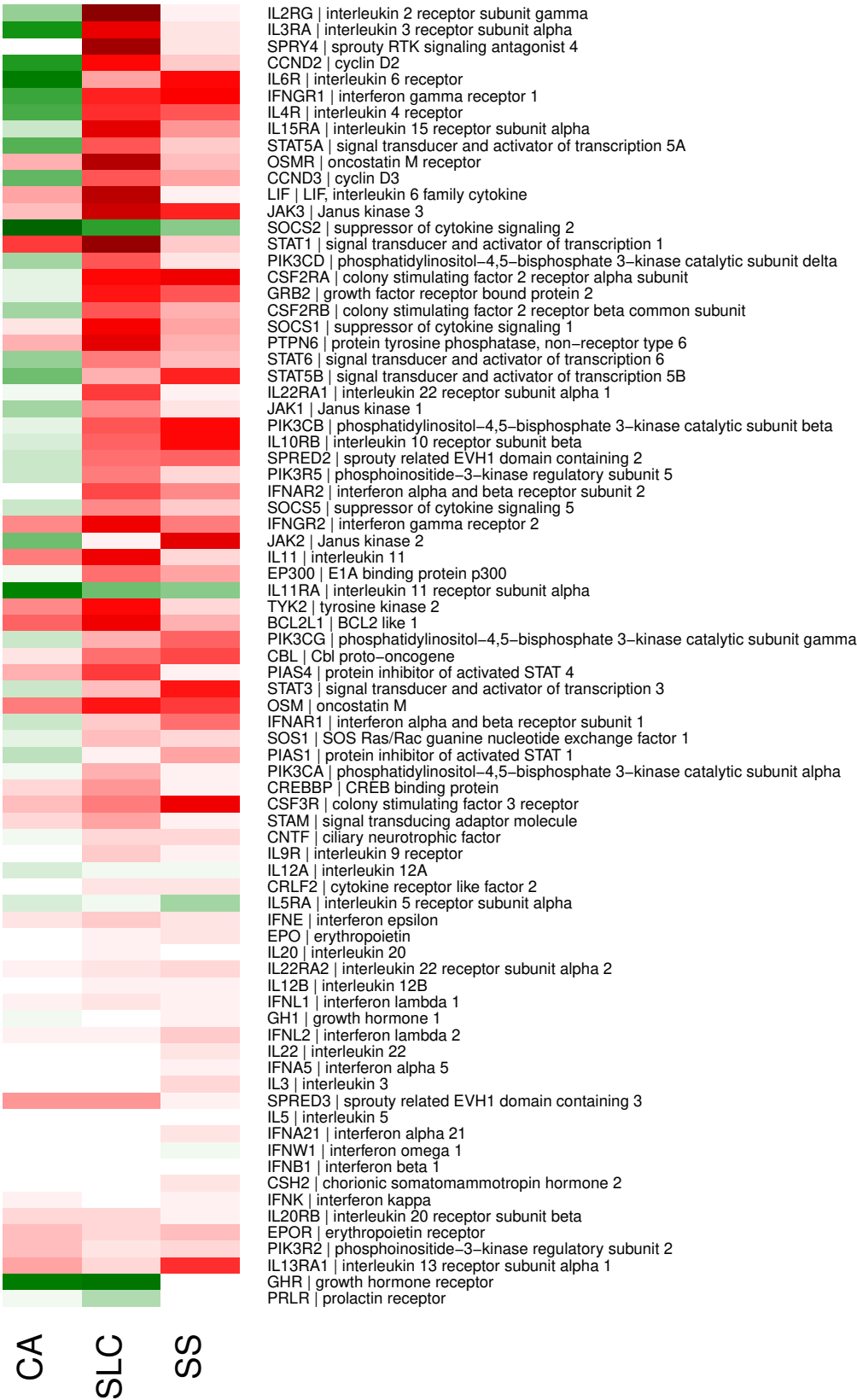
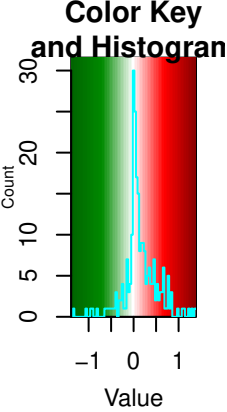
hsa04370



Signal transduction

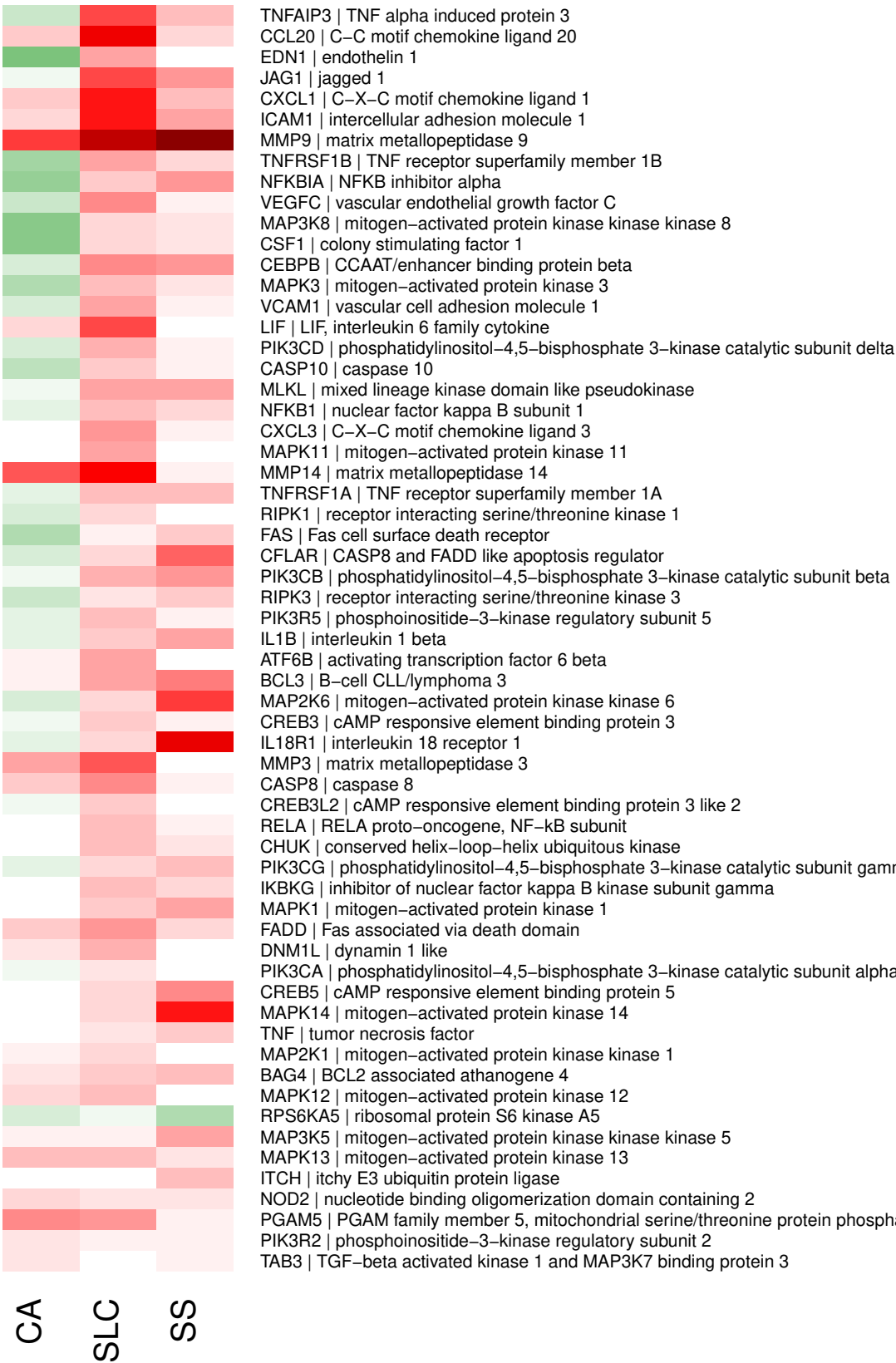
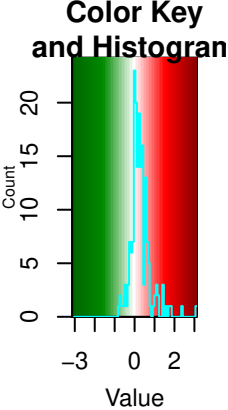
Jak-STAT signaling pathway

hsa04630

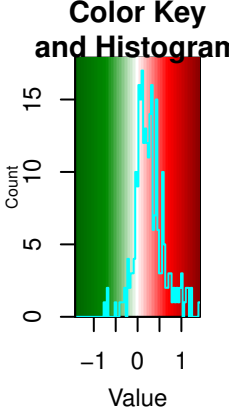


Signal transduction

TNF signaling pathway
hsa04668

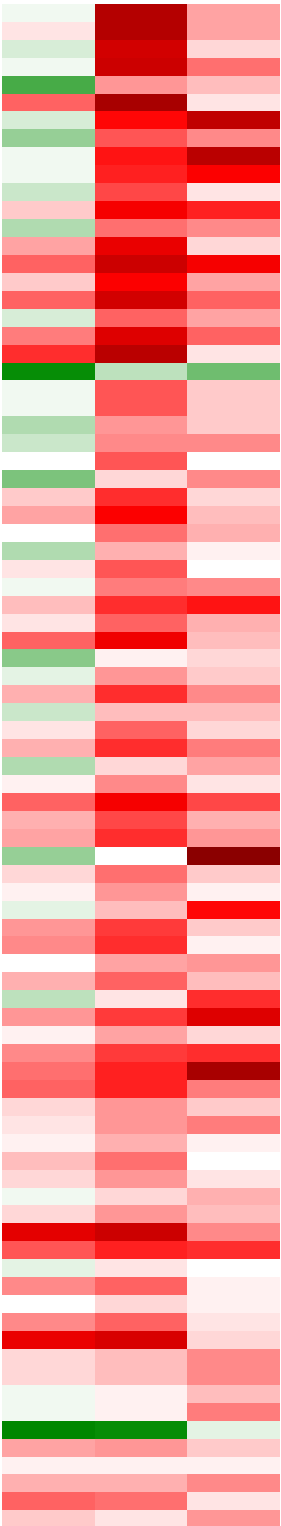


Signal transduction



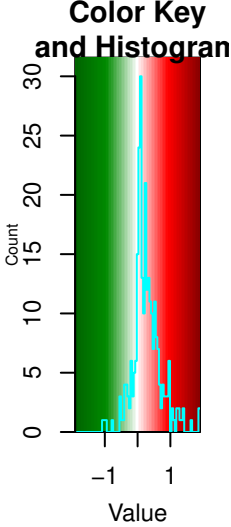
Lysosome

hsa04142

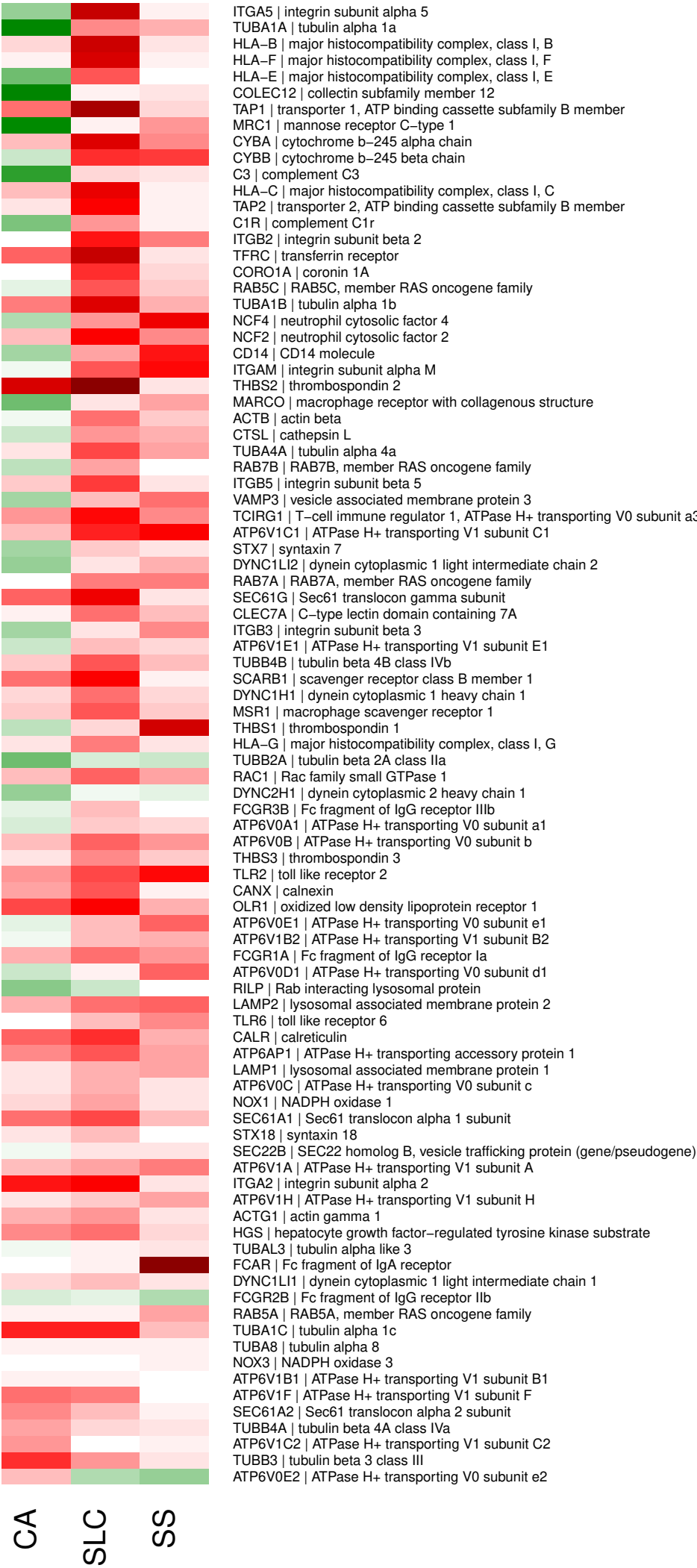


- CTSC | cathepsin C
- LAPTM5 | lysosomal protein transmembrane 5
- CTSK | cathepsin K
- CTSZ | cathepsin Z
- GALC | galactosylceramidase
- LAMP3 | lysosomal associated membrane protein 3
- CD63 | CD63 molecule
- LITAF | lipopolysaccharide induced TNF factor
- GNS | glucosamine (N-acetyl)-6-sulfatase
- TPP1 | tripeptidyl peptidase 1
- NPC2 | NPC intracellular cholesterol transporter 2
- GM2A | GM2 ganglioside activator
- CTSL | cathepsin L
- DNASE2 | deoxyribonuclease 2, lysosomal
- CTSA | cathepsin A
- PPT1 | palmitoyl-protein thioesterase 1
- GLA | galactosidase alpha
- PSAP | prosaposin
- TCIRG1 | T-cell immune regulator 1, ATPase H+ transporting V0 subunit a3
- CTSV | cathepsin V
- CTSO | cathepsin O
- GAA | glucosidase alpha, acid
- CTNS | cystinosis, lysosomal cystine transporter
- IDS | iduronate 2-sulfatase
- SLC17A5 | solute carrier family 17 member 5
- AP3S1 | adaptor related protein complex 3 sigma 1 subunit
- ASAH1 | N-acylsphingosine amidohydrolase 1
- HEXB | hexosaminidase subunit beta
- CTSH | cathepsin H
- AP1M1 | adaptor related protein complex 1 mu 1 subunit
- LAPTM4A | lysosomal protein transmembrane 4 alpha
- MANBA | mannosidase beta
- CD68 | CD68 molecule
- IGF2R | insulin like growth factor 2 receptor
- ARSB | arylsulfatase B
- AP1M2 | adaptor related protein complex 1 mu 2 subunit
- CLN5 | CLN5, intracellular trafficking protein
- CTSE | cathepsin E
- GALNS | galactosamine (N-acetyl)-6-sulfatase
- ATP6V0A1 | ATPase H+ transporting V0 subunit a1
- MCOLN1 | mucolipin 1
- ATP6V0B | ATPase H+ transporting V0 subunit b
- CLTB | clathrin light chain B
- ARSA | arylsulfatase A
- NEU1 | neuraminidase 1
- GUSB | glucuronidase beta
- CLTC | clathrin heavy chain
- SORT1 | sortilin 1
- NAGA | alpha-N-acetylgalactosaminidase
- AP4B1 | adaptor related protein complex 4 beta 1 subunit
- CD164 | CD164 molecule
- GLB1 | galactosidase beta 1
- AP4M1 | adaptor related protein complex 4 mu 1 subunit
- SCARB2 | scavenger receptor class B member 2
- PLA2G15 | phospholipase A2 group XV
- ATP6V0D1 | ATPase H+ transporting V0 subunit d1
- CTSD | cathepsin D
- ABCA2 | ATP binding cassette subfamily A member 2
- LAMP2 | lysosomal associated membrane protein 2
- SLC11A1 | solute carrier family 11 member 1
- ATP6AP1 | ATPase H+ transporting accessory protein 1
- GGA1 | golgi associated, gamma adaptin ear containing, ARF binding protein 1
- LAMP1 | lysosomal associated membrane protein 1
- GNPTG | N-acetylglucosamine-1-phosphate transferase gamma subunit
- GGA3 | golgi associated, gamma adaptin ear containing, ARF binding protein 3
- ATP6V0C | ATPase H+ transporting V0 subunit c
- AP1G1 | adaptor related protein complex 1 gamma 1 subunit
- SLC11A2 | solute carrier family 11 member 2
- LAPTM4B | lysosomal protein transmembrane 4 beta
- CTSB | cathepsin B
- NAPSA | napsin A aspartic peptidase
- AP3D1 | adaptor related protein complex 3 delta 1 subunit
- AP3B1 | adaptor related protein complex 3 beta 1 subunit
- CLTA | clathrin light chain A
- AP1S1 | adaptor related protein complex 1 sigma 1 subunit
- ATP6V1H | ATPase H+ transporting V1 subunit H
- SGSH | N-sulfoglucosamine sulfohydrolase
- SUMF1 | sulfatase modifying factor 1
- AP3B2 | adaptor related protein complex 3 beta 2 subunit
- CTSF | cathepsin F
- ACP2 | acid phosphatase 2, lysosomal
- DNASE2B | deoxyribonuclease 2 beta
- ENTPD4 | ectonucleoside triphosphate diphosphohydrolase 4
- AP1G2 | adaptor related protein complex 1 gamma 2 subunit
- CLTCL1 | clathrin heavy chain like 1

Transport and catabolism



Phagosome hsa04145



Transport and catabolism