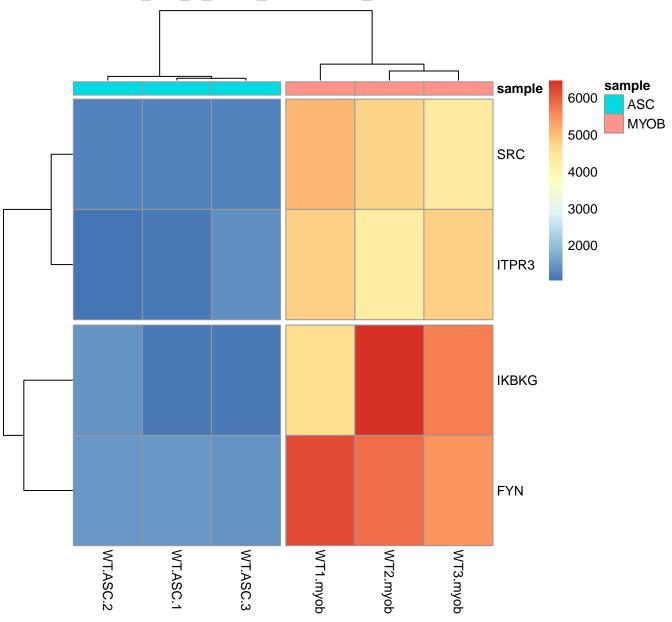
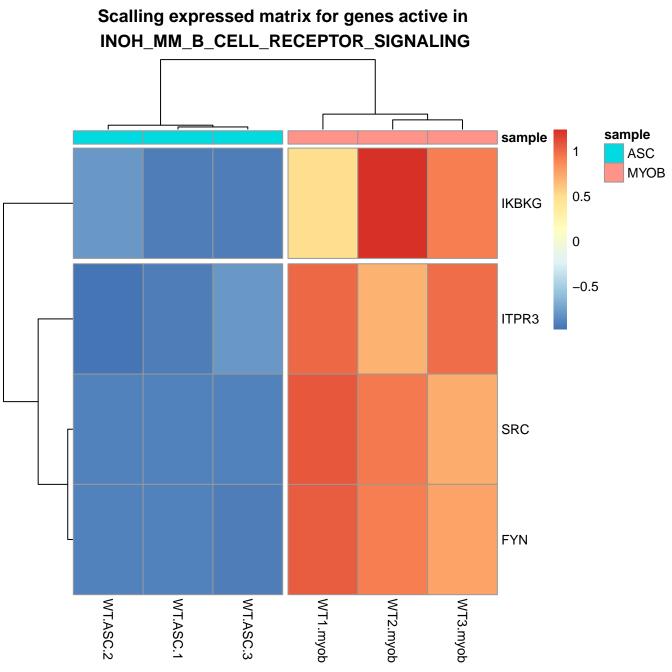
Expressed Matrix from Normalized for genes in INOH_MM_B_CELL_RECEPTOR_SIGNALING



Expressed Matrix for genes active in INOH_MM_B_CELL_RECEPTOR_SIGNALING 12.5 sample sample ASC MYOB 12 SRC 11.5 11 10.5 ITPR3 **IKBKG** FYN WT1.myob WT2.myob WT3.myob WT.ASC.2 WT.ASC.3

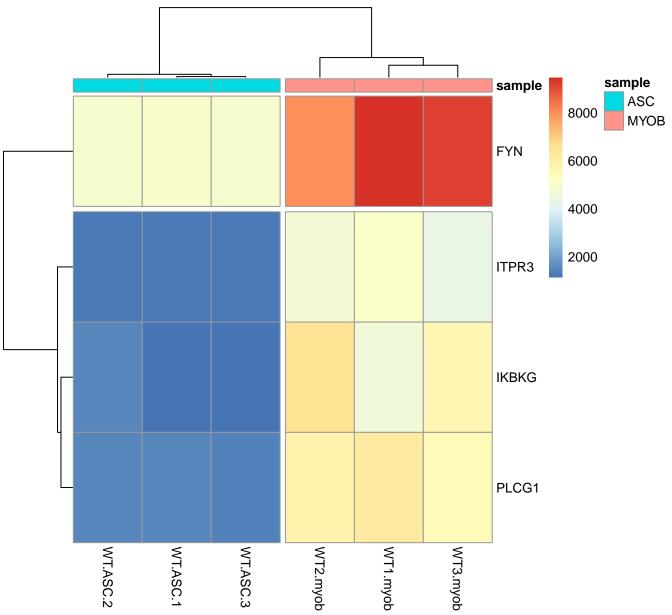


Expressed Matrix from Normalized for genes in INOH_MM_BUTANOATE_METABOLISM 10000 sample sample ASC MYOB **EHHADH** 8000 6000 ACSS2 4000 OXCT1 2000 HMGCS2 DLAT **PDHX** ACAT1 **HADHA HMGCL** WT.ASC.1 WT.ASC.3 WT2.myob WT1.myob WT3.myob

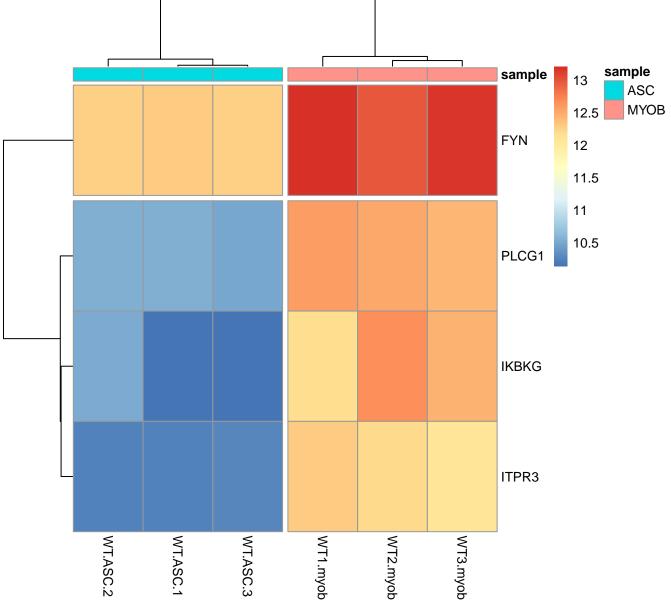
Expressed Matrix for genes active in INOH_MM_BUTANOATE_METABOLISM sample sample 12 ASC MYOB PDHX 10 8 **EHHADH** 6 ACSS2 4 2 DLAT OXCT1 HMGCS2 **HMGCL HADHA** ACAT1 WT.ASC.2 WT.ASC.3 WT1.myob WT2.myob WT3.myob

Scalling expressed matrix for genes active in INOH_MM_BUTANOATE_METABOLISM sample sample ASC 1 ACAT1 MYOB 0.5 **HADHA** 0 OXCT1 -0.5-1 **EHHADH** DLAT **HMGCL PDHX** ACSS2 HMGCS2 WT2.myob WT1.myob WT3.myob WT.ASC.3

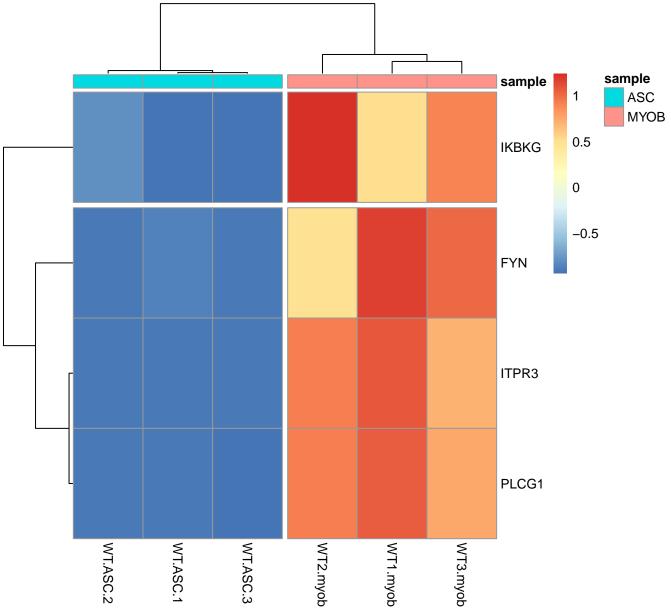
Expressed Matrix from Normalized for genes in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-NFKB_CASCADE



Expressed Matrix for genes active in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-NFKB_CASCADE



Scalling expressed matrix for genes active in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-NFKB_CASCADE

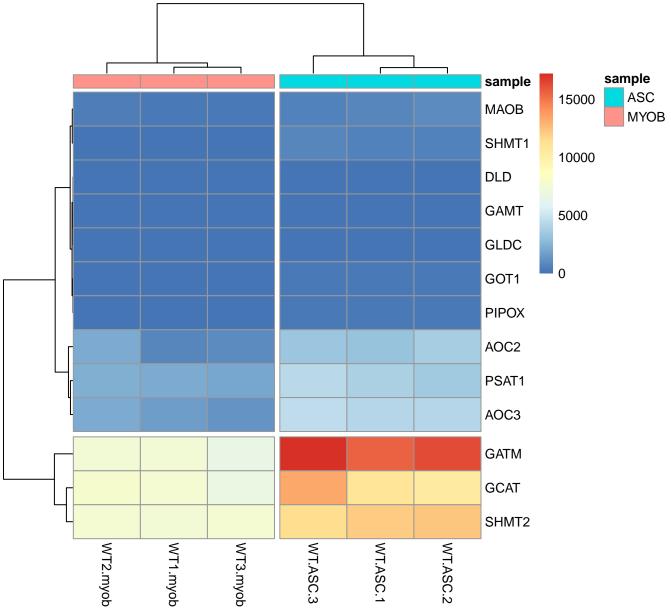


Expressed Matrix from Normalized for genes in INOH_MM_CITRATE_CYCLE sample sample ASC 20000 SUCLG2 MYOB CS 15000 IDH3B **SDHB** 10000 ACO2 5000 DLST SDHA SUCLA2 SDHD IDH3A IDH3G ACAT1 MDH2 ACO₁ DLD **OGDH** WT.ASC.3 WT3.myob

Expressed Matrix for genes active in INOH_MM_CITRATE_CYCLE sample sample ASC 14 ACO₂ MYOB 13.5 DLST 13 **SDHA** 12.5 SUCLA2 12 **SDHD** 11.5 IDH3A 11 SUCLG2 CS IDH3B **SDHB** ACO1 OGDH IDH3G DLD ACAT1 MDH2 WT.ASC.3 WT.ASC.2 WT1.myob WT3.myob

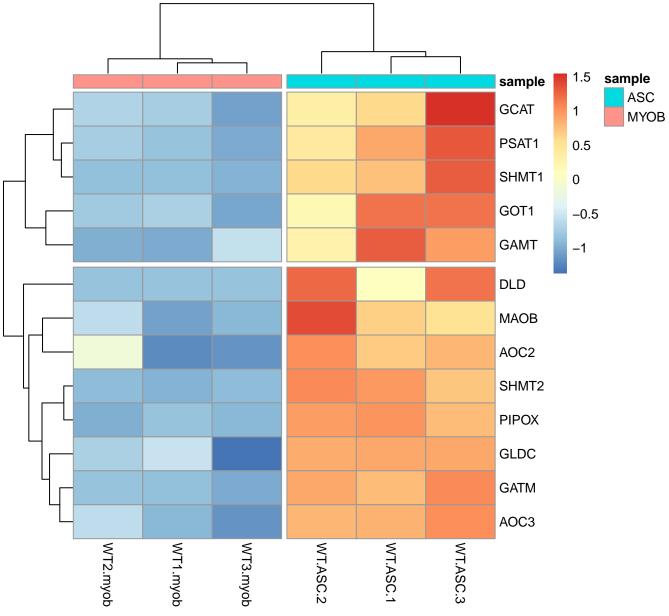
Scalling expressed matrix for genes active in INOH_MM_CITRATE_CYCLE 1.5 sample sample ASC CS 1 MYOB SDHB 0.5 ACAT1 0 MDH2 SUCLG2 -0.5ACO2 -1 IDH3A SUCLA2 IDH3G ACO1 IDH3B OGDH SDHD DLD DLST SDHA WT.ASC.3 WT.ASC.1 WT1.myob WT3.myob

Expressed Matrix from Normalized for genes in INOH_MM_GLYCINE_SERINE_METABOLISM

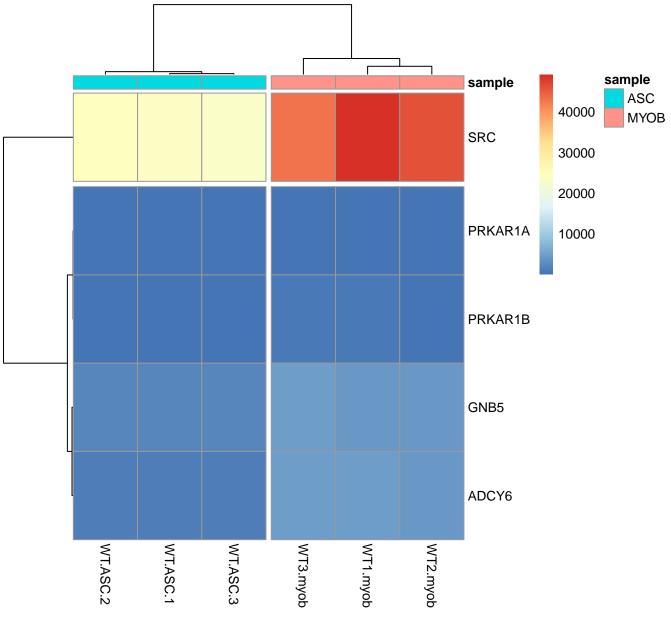


Expressed Matrix for genes active in INOH_MM_GLYCINE_SERINE_METABOLISM 14 sample sample ASC 12 DLD MYOB 10 **GAMT** 8 **GLDC** 6 MAOB 4 2 SHMT1 GOT1 **PIPOX GATM GCAT** SHMT2 AOC2 PSAT1 AOC3 WT.ASC.2 WT.ASC.3 WT3.myob WT1.myob WT2.myob

Scalling expressed matrix for genes active in INOH_MM_GLYCINE_SERINE_METABOLISM

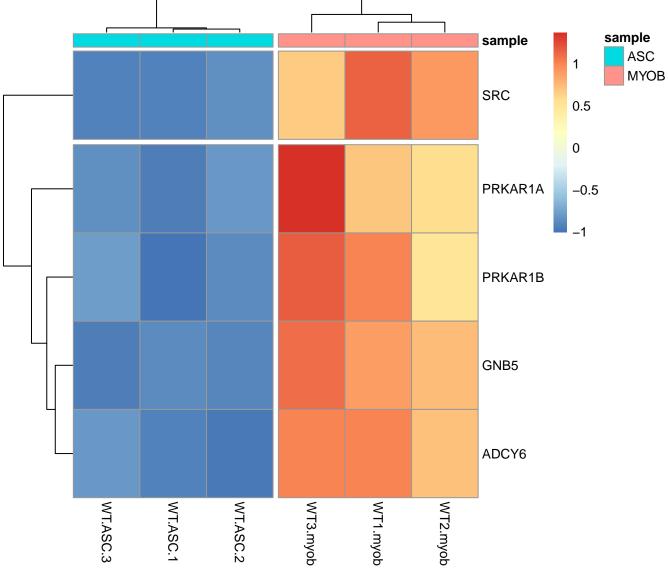


Expressed Matrix from Normalized for genes in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR

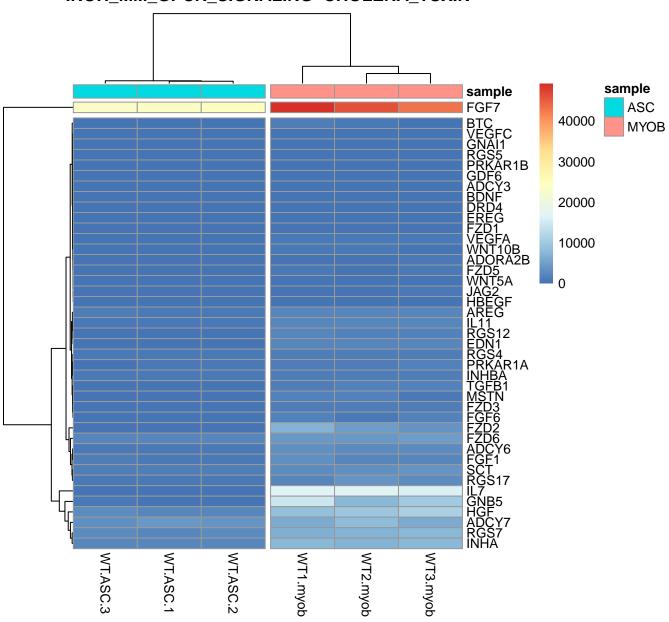


Expressed Matrix for genes active in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR sample sample ASC 14 MYOB PRKAR1A 12 10 PRKAR1B 8 SRC GNB5 ADCY6 WT3.myob WT1.myob

Scalling expressed matrix for genes active in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR sample sample ASC 1 MYOB SRC 0.5 0 PRKAR1A -0.5

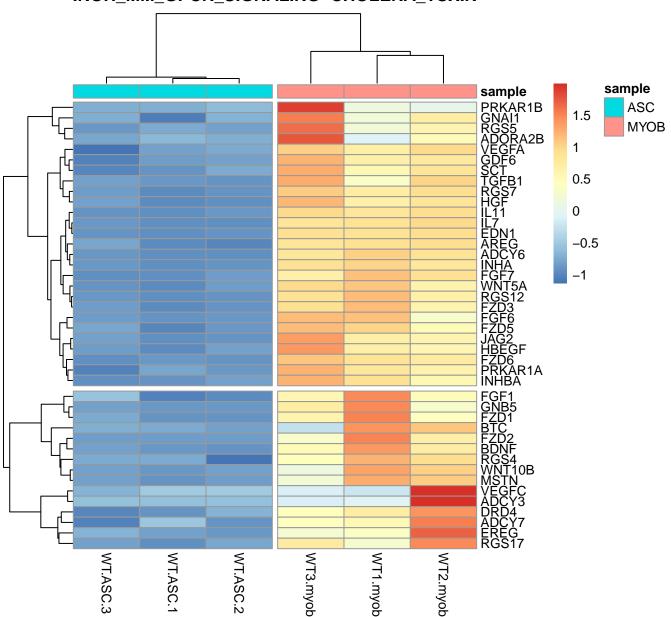


Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-CHOLERA_TOXIN

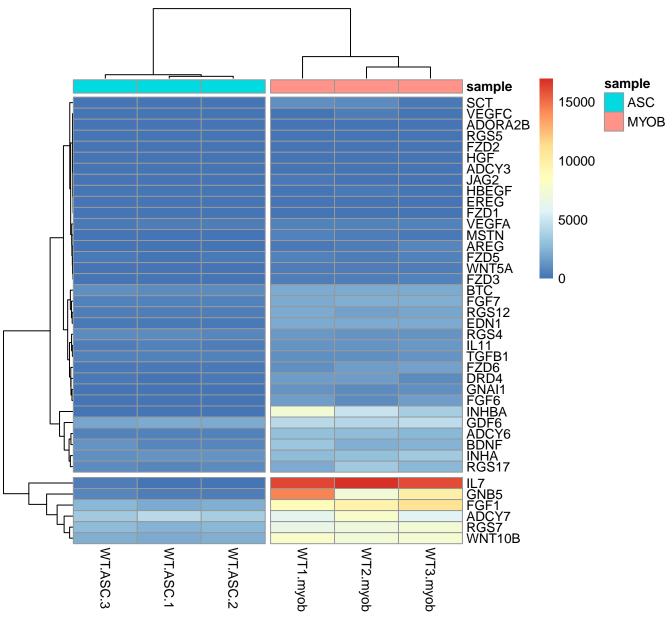


Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-CHOLERA_TOXIN 15 sample sample PRKAR1B
VEGFC
BDNF
DRD4
FZD3
FGF6
ADOR A2B
JAG2
HBECF
BTC
WNT10B
ADCY3
RGDF6
WNT5A
GNAI1
EREG
FZD1 ASC MYOB 10 5 0 FGF7 FZD2 IL7 GNB5 FZD6 FZD6 ADCY7 HGS7 HGS7 INHA TGFB1 WSTNA VEZD5 FGF1 ARES17 ARES17 ARES14 ADCY6 IL1S12 EDN1 WT.ASC.2

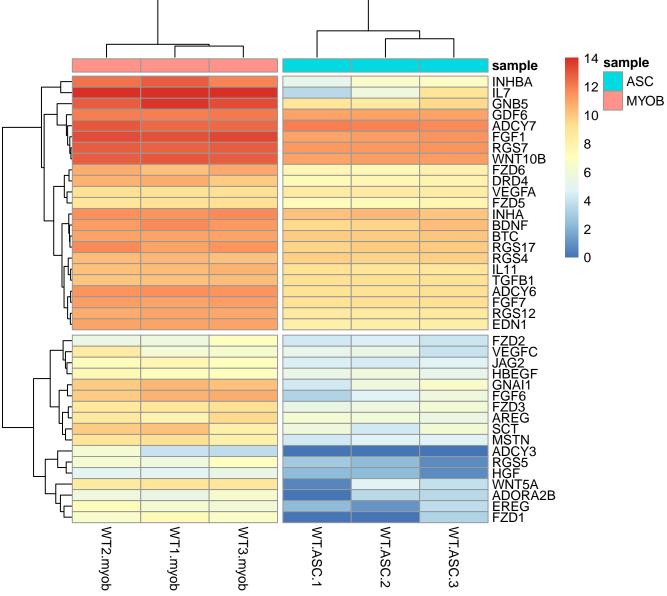
Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-CHOLERA_TOXIN



Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-G_ALPHA_I

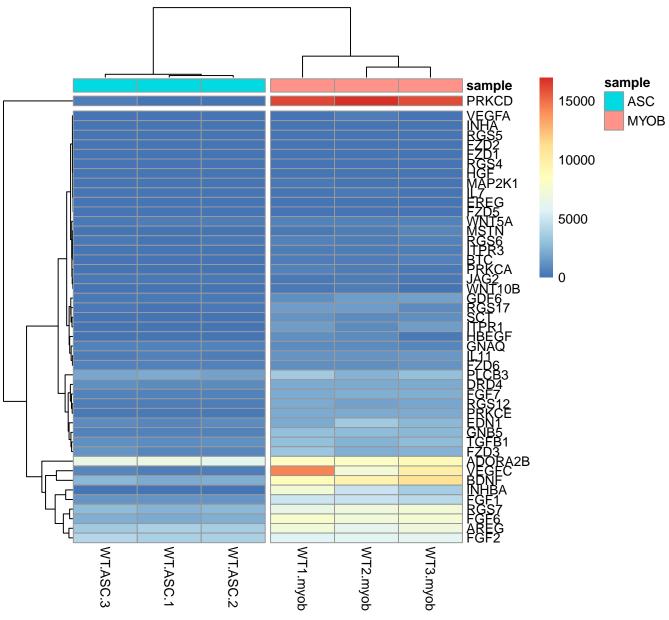


Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_I ¹⁴ sample sample INHBA IL7 GNB5 GDF6 ADCY7 FGF1 RGS7 WNT10B **ASC** 12 10 8 FZD6 DRD4 VEGFA 6 FZD5 4 INHA BDNF 2 BTC RGS17 RGS4 IL11 0 TGFB1 ADCY6 FGF7 RGS12 EDN1 FZD2 VEGFC JAG2 HBEGF GNAI1 FGF6 FD53



Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_I sample sample FZD6 RGS5 AREG VEGFA HGF INHA FZD6 RGS7 FGF1 FGF7 ASC 1.5 MYOB 1 0.5 0 EDN1 BTC -0.5ADCY6 WNT10B FZD3 GDF6 IL11 TGFB1 WNT5A RGS12 GNAI1 FGF6 FZD5 BDNF GNB5 FZD1 INHBA JAG2 RGS4 MSTN DRD4 VEGFC ADCY3 HBEGF ADCY7 EREG RGS17 WT.ASC.3 WT.ASC.1 WT.ASC.2 WT1.myob

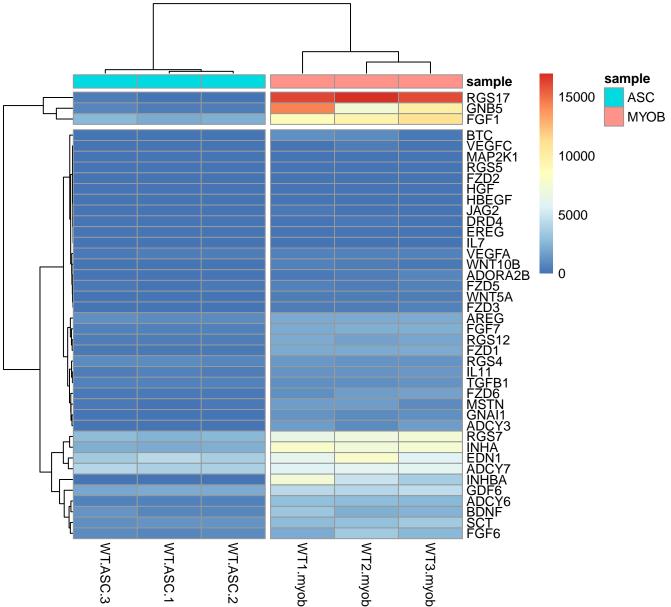
Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q



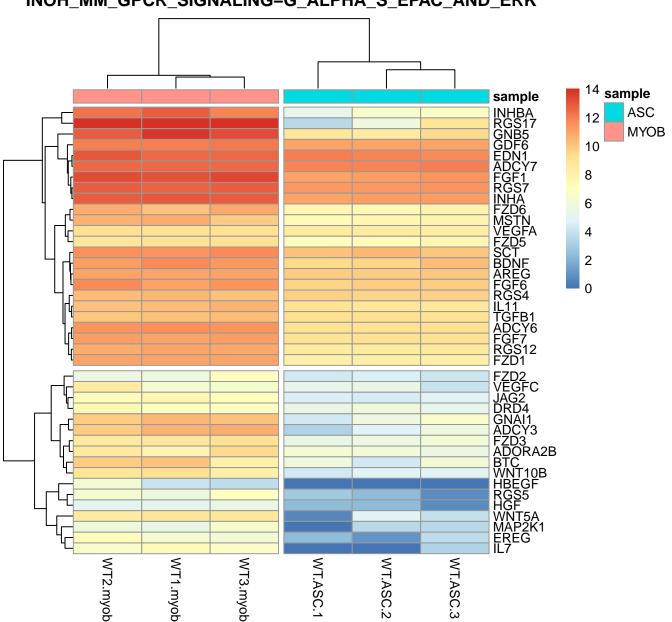
Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q ¹⁴ sample sample ASC 12 MYOB 10 8 6 4 2 0

Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q sample sample WNT10B VEGFA FZD1 JAG2 GNAQ ASC 1.5 MYOB 1 0.5 0 -0.5WT.ASC.3 WT.ASC.1 WT.ASC.2

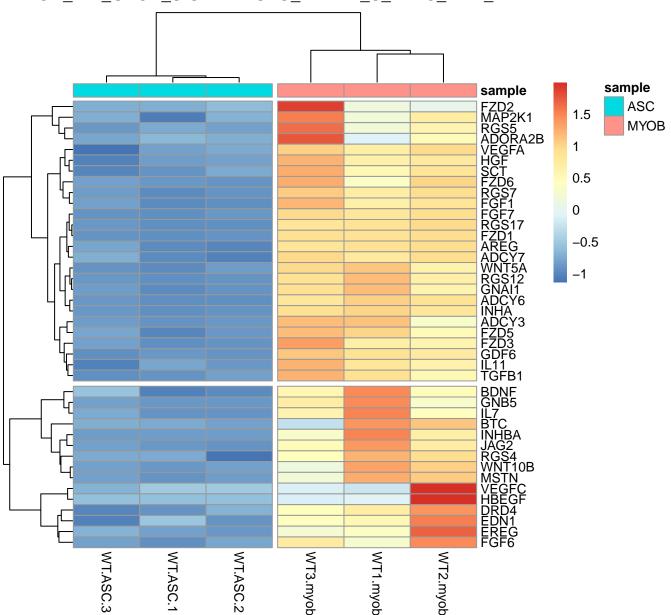
Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-G_ALPHA_S_EPAC_AND_ERK



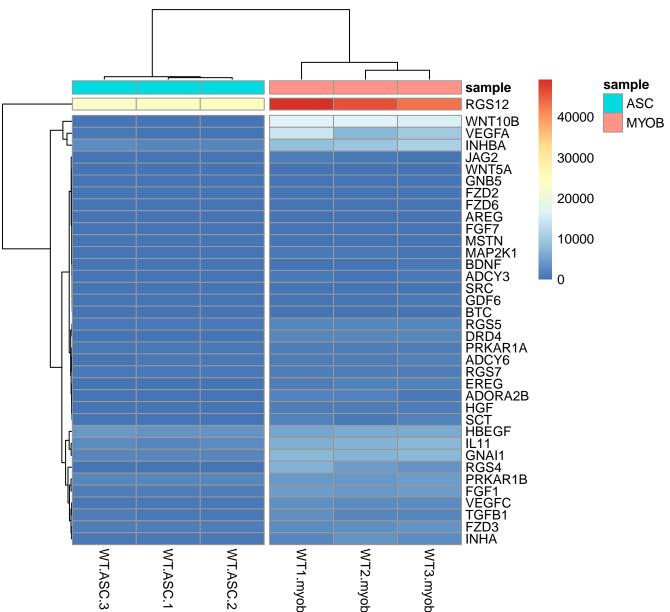
Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_S_EPAC_AND_ERK



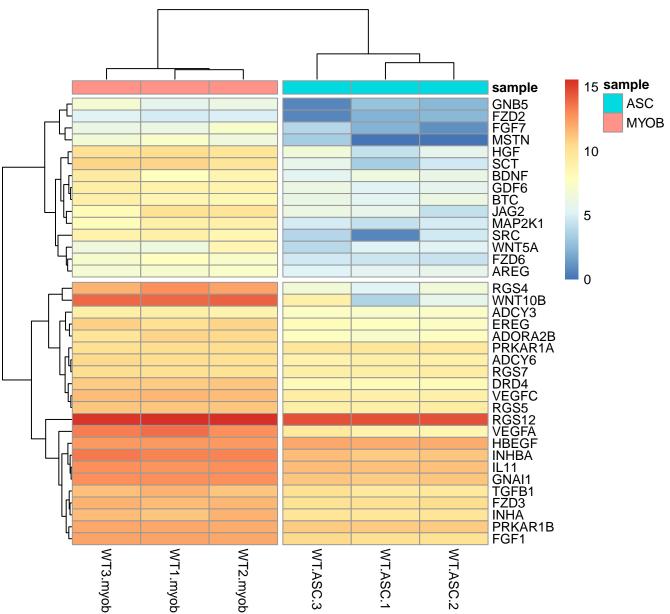
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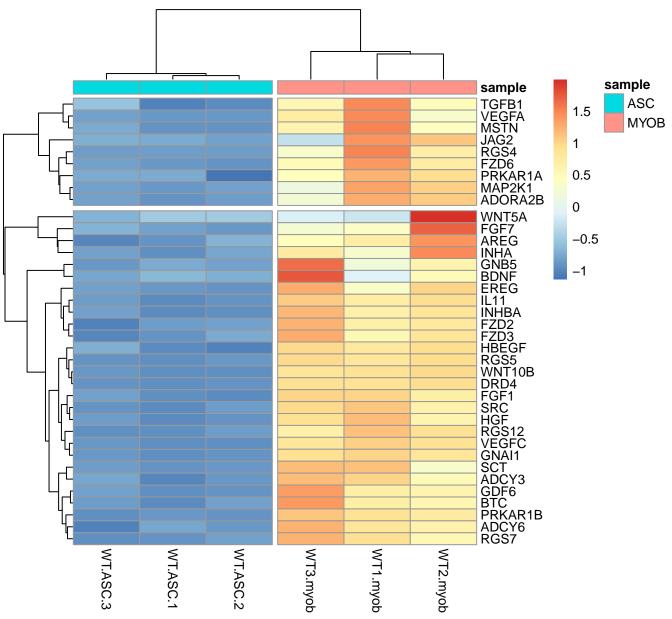
Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-G_ALPHA_S_PKA_AND_ERK



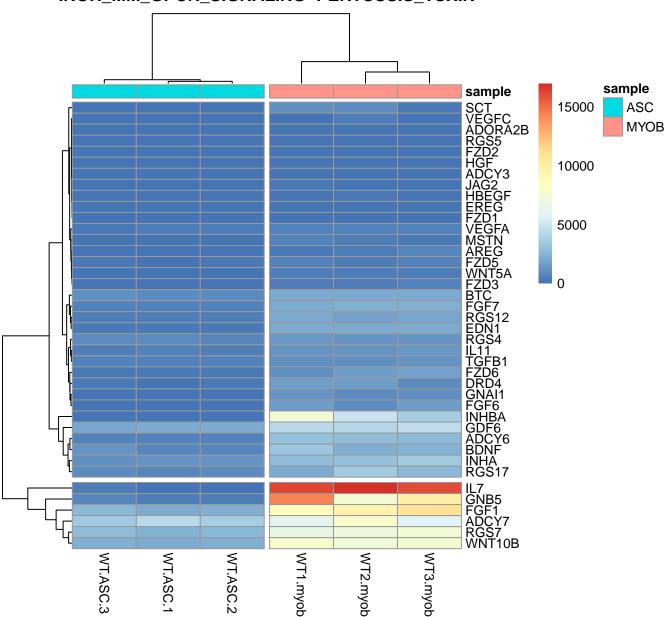
Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_S_PKA_AND_ERK



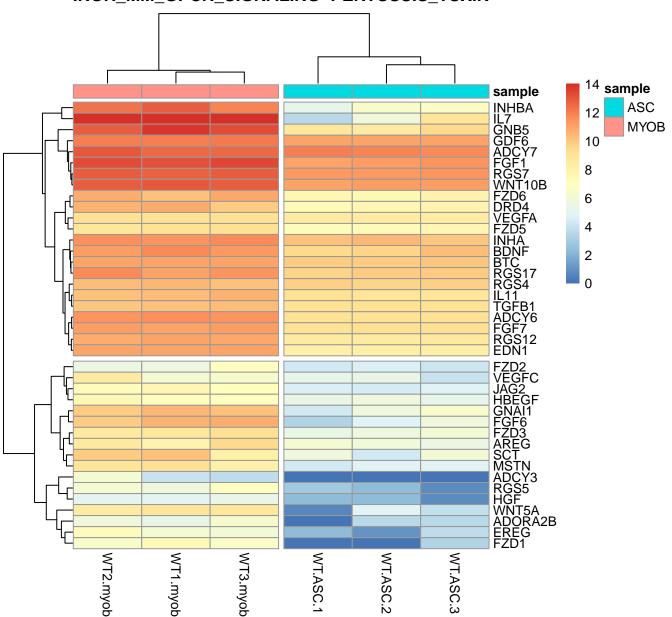
Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_S_PKA_AND_ERK



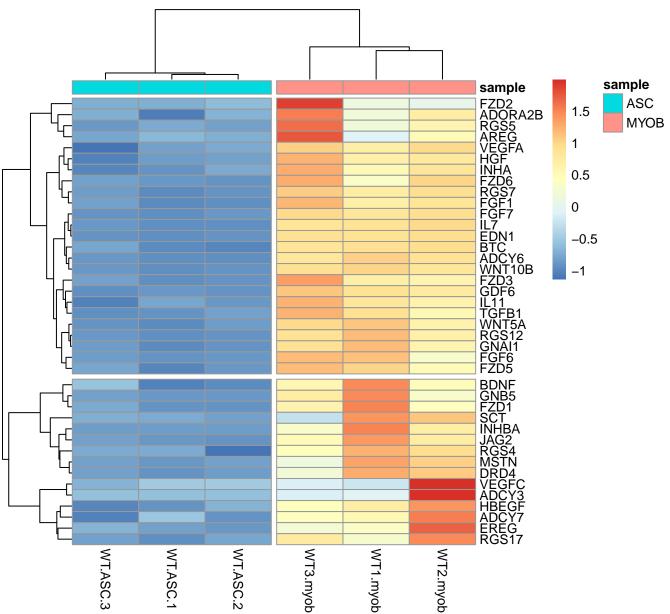
Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-PERTUSSIS_TOXIN



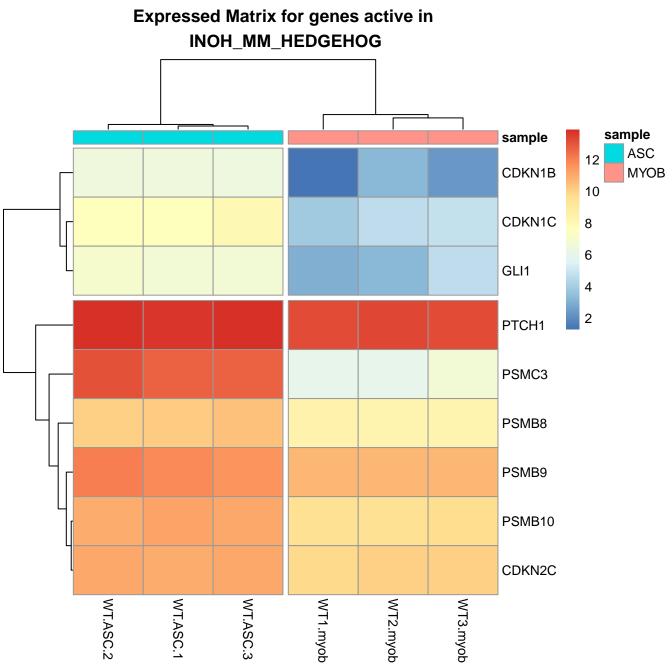
Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-PERTUSSIS_TOXIN

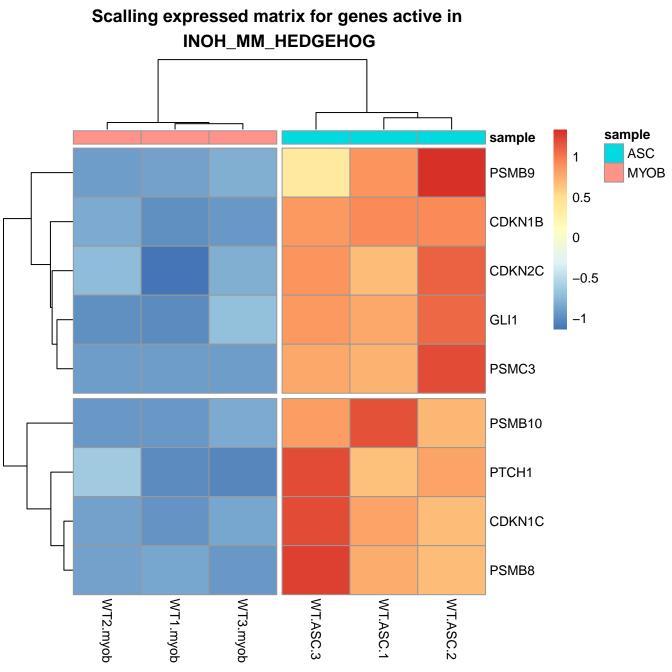


Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-PERTUSSIS_TOXIN

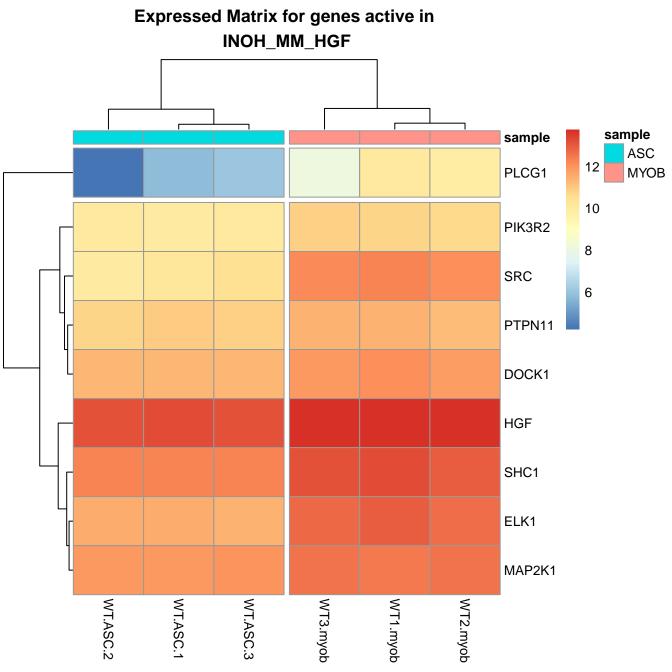


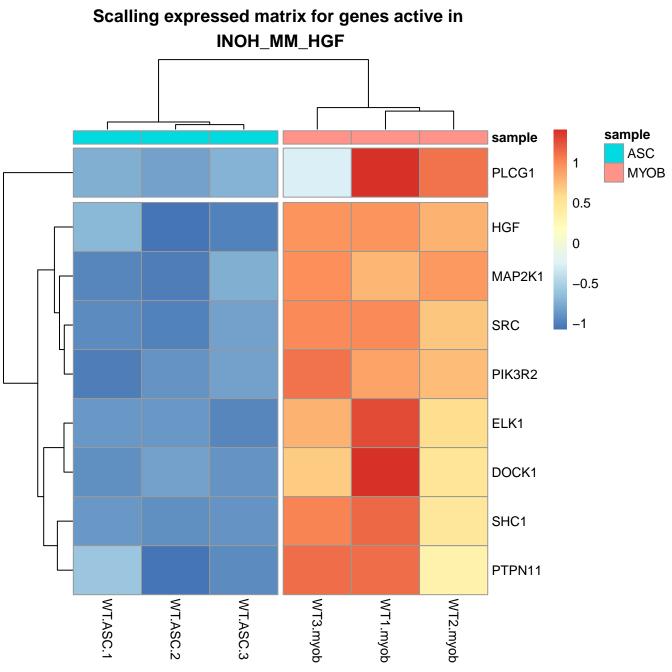
Expressed Matrix from Normalized for genes in INOH_MM_HEDGEHOG sample sample 14000 ASC PTCH1 12000 MYOB 10000 8000 PSMC3 6000 PSMB9 4000 2000 CDKN1C CDKN1B GLI1 PSMB8 PSMB10 CDKN2C WT2.myob WT1.myob WT3.myob WT.ASC.2



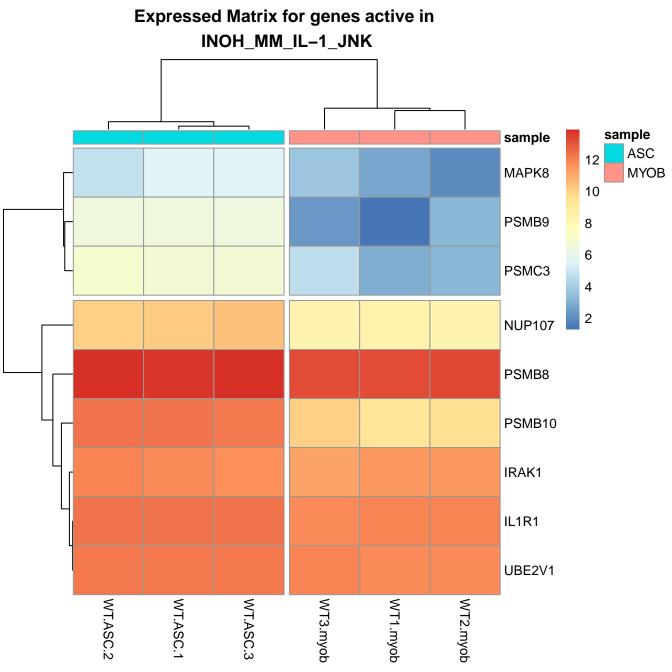


Expressed Matrix from Normalized for genes in INOH_MM_HGF sample sample ASC 12000 MYOB **SRC** 10000 8000 DOCK1 6000 PLCG1 4000 2000 PTPN11 PIK3R2 HGF SHC1 ELK1 MAP2K1 WT.ASC.2 WT.ASC.3 WT2.myob WT1.myob WT3.myob



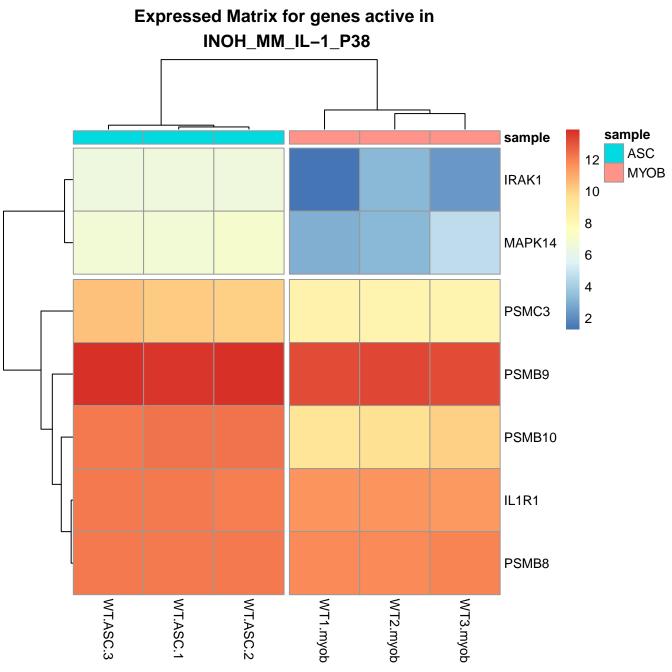


Expressed Matrix from Normalized for genes in INOH_MM_IL-1_JNK sample sample 14000 ASC PSMB8 12000 MYOB 10000 8000 **NUP107** 6000 MAPK8 4000 2000 PSMB9 PSMC3 PSMB10 IRAK1 IL1R1 UBE2V1 WT2.myob WT1.myob WT3.myob



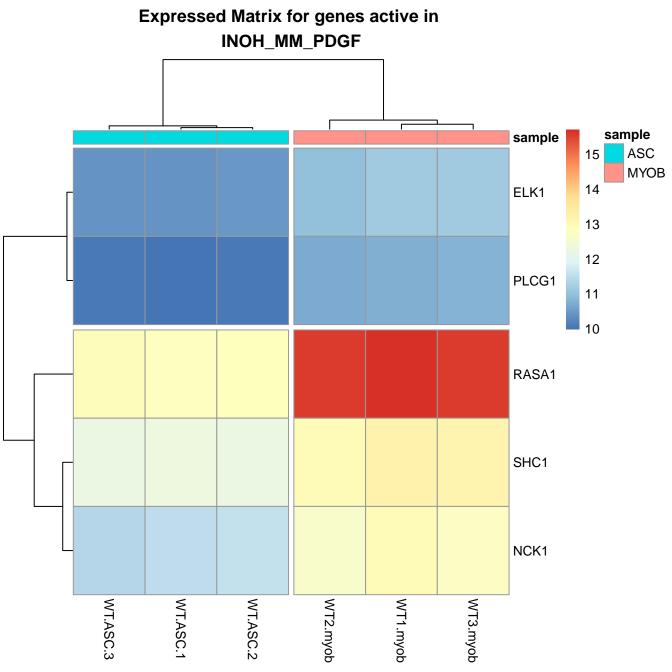
Scalling expressed matrix for genes active in INOH_MM_IL-1_JNK sample sample 1 ASC MYOB MAPK8 0.5 UBE2V1 0 -0.5PSMB8 -1 IL1R1 **NUP107** IRAK1 PSMC3 PSMB10 PSMB9 WT3.myob WT.ASC.3 WT1.myob WT2.myob WT.ASC.2

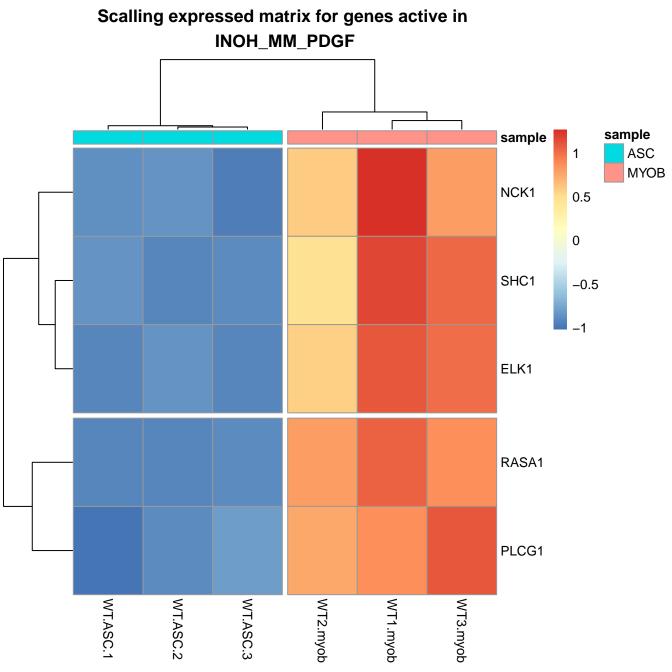
Expressed Matrix from Normalized for genes in INOH_MM_IL-1_P38 sample sample 14000 ASC 12000 MYOB PSMB9 10000 8000 PSMC3 6000 4000 2000 IRAK1 MAPK14 PSMB10 IL1R1 PSMB8 WT2.myob WT3.myob



Scalling expressed matrix for genes active in INOH_MM_IL-1_P38 sample sample 1 ASC MYOB MAPK14 0.5 0 PSMB10 -0.5IRAK1 PSMB9 PSMC3 IL1R1 PSMB8 WT3.myob WT1.myob WT.ASC.3 WT2.myob

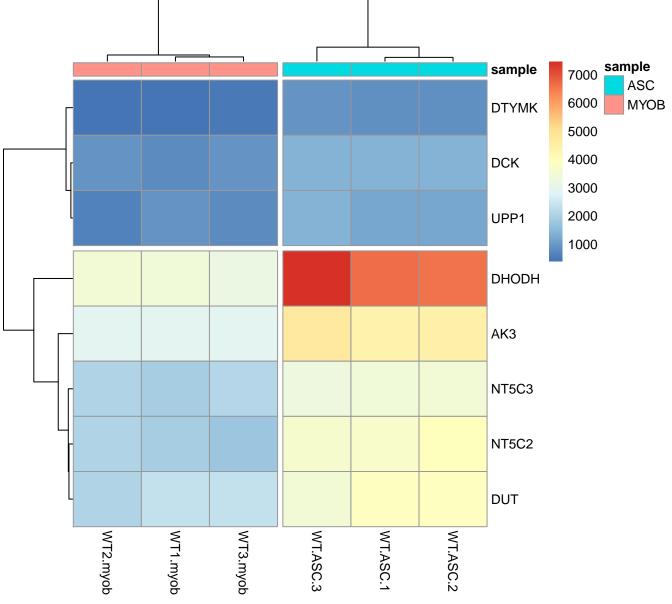
Expressed Matrix from Normalized for genes in INOH_MM_PDGF sample sample 50000 ASC MYOB 40000 RASA1 30000 20000 ELK1 10000 PLCG1 SHC1 NCK1 WT.ASC.3 WT.ASC.2 WT1.myob WT2.myob WT3.myob



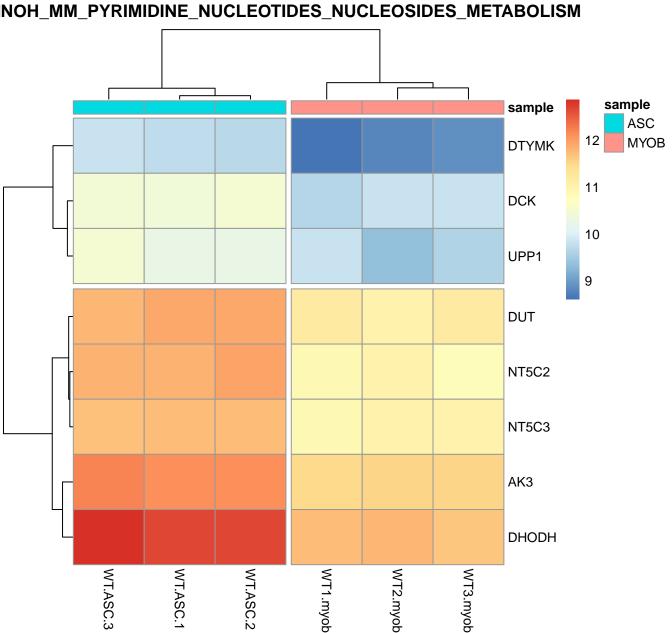


IOH_MM_PYRIMIDINE_NUCLEOTIDES_NUCLEOSIDES_METABOLISM

Expressed Matrix from Normalized for genes in

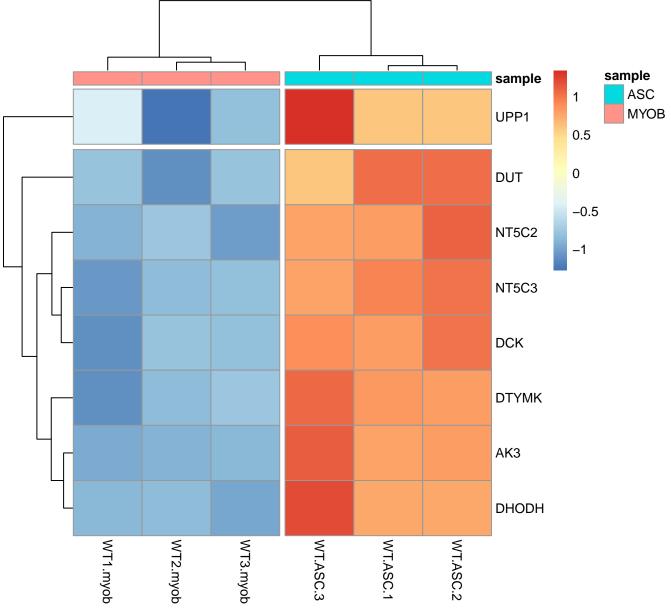


Expressed Matrix for genes active in

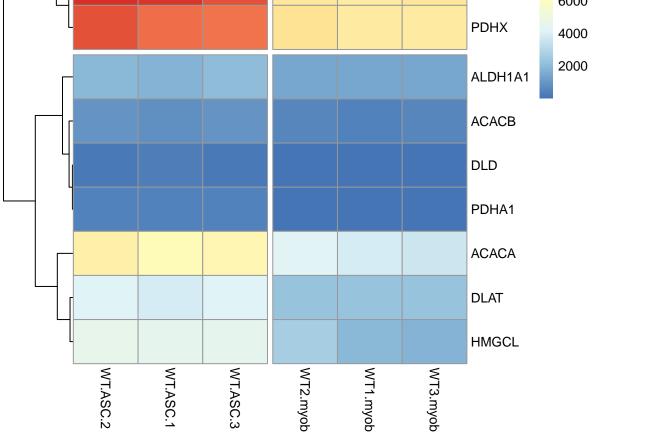


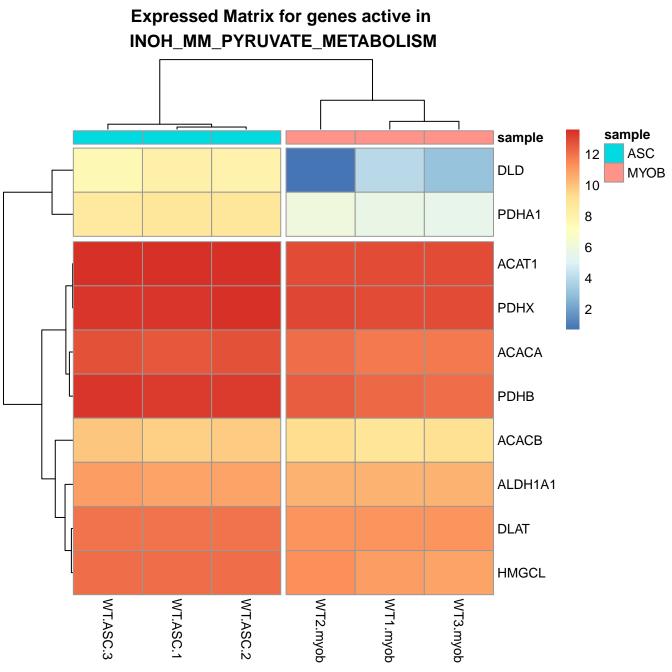
NOH_MM_PYRIMIDINE_NUCLEOTIDES_NUCLEOSIDES_METABOLISM

Scalling expressed matrix for genes active in



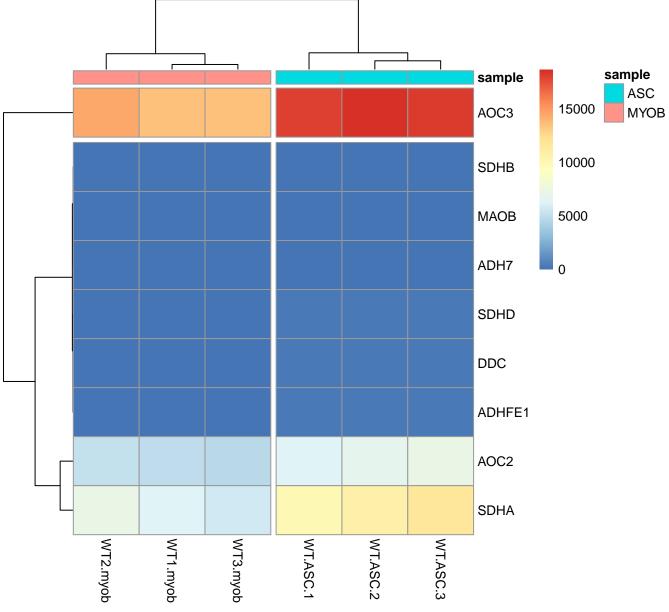
Expressed Matrix from Normalized for genes in INOH_MM_PYRUVATE_METABOLISM 12000 **sample** sample ASC 10000 PDHB MYOB 8000 ACAT1 6000 **PDHX** 4000 2000 ALDH1A1 **ACACB** DLD PDHA1 **ACACA**





Scalling expressed matrix for genes active in INOH_MM_PYRUVATE_METABOLISM sample sample ASC 1 **ACACB** MYOB 0.5 DLD 0 ACAT1 -0.5PDHA1 -1 ALDH1A1 **PDHB HMGCL** DLAT **ACACA PDHX** WT2.myob WT.ASC.2 WT1.myob WT3.myob WT.ASC.3

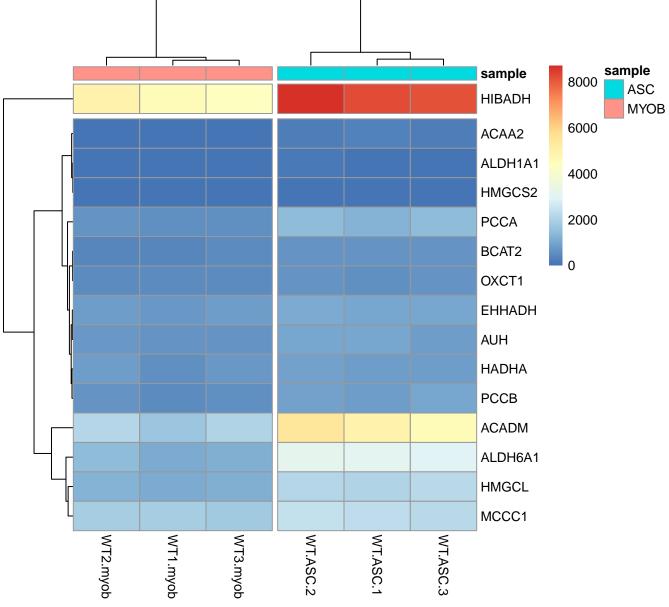
Expressed Matrix from Normalized for genes in INOH_MM_TYROSINE_METABOLISM



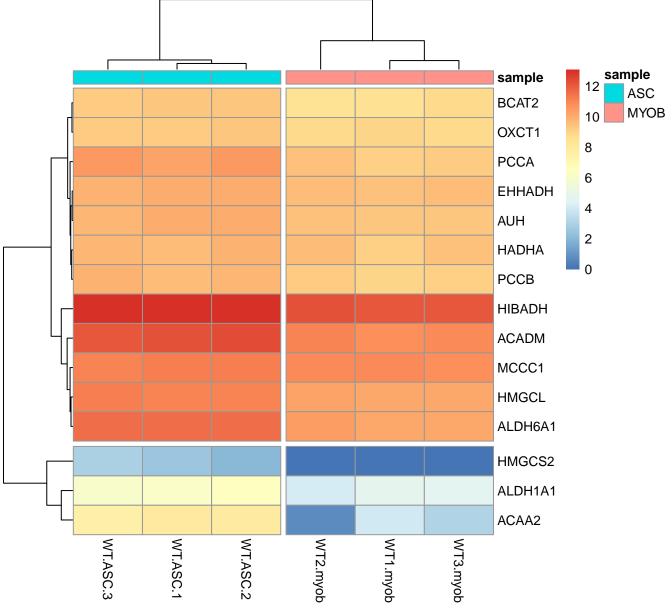
Expressed Matrix for genes active in INOH_MM_TYROSINE_METABOLISM 14 sample sample ASC 12 MYOB AOC3 10 8 AOC2 6 **SDHA** 4 2 ADHFE1 **SDHD** DDC MAOB ADH7 **SDHB** WT.ASC.1 WT.ASC.3 WT2.myob WT3.myob WT1.myob

Scalling expressed matrix for genes active in INOH_MM_TYROSINE_METABOLISM sample sample 1.5 ASC MYOB DDC 1 0.5 ADH7 0 **SDHD** -0.5AOC2 **SDHA** AOC3 ADHFE1 MAOB **SDHB** WT2.myob WT.ASC.2 WT1.myob

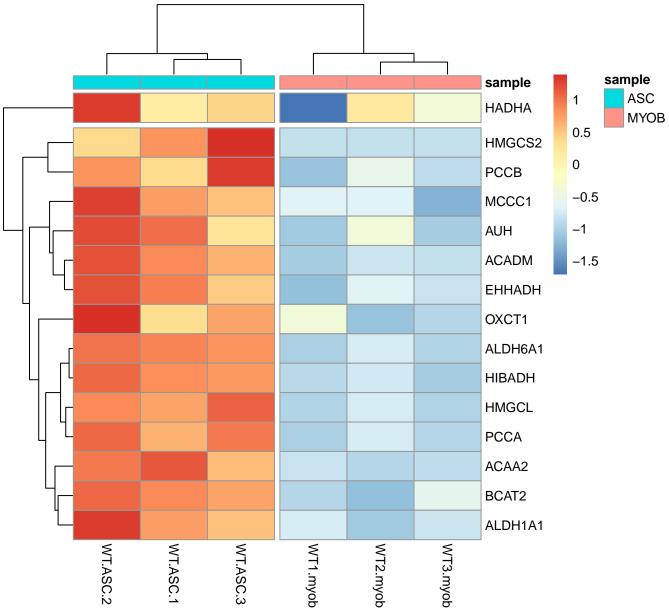
Expressed Matrix from Normalized for genes in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION



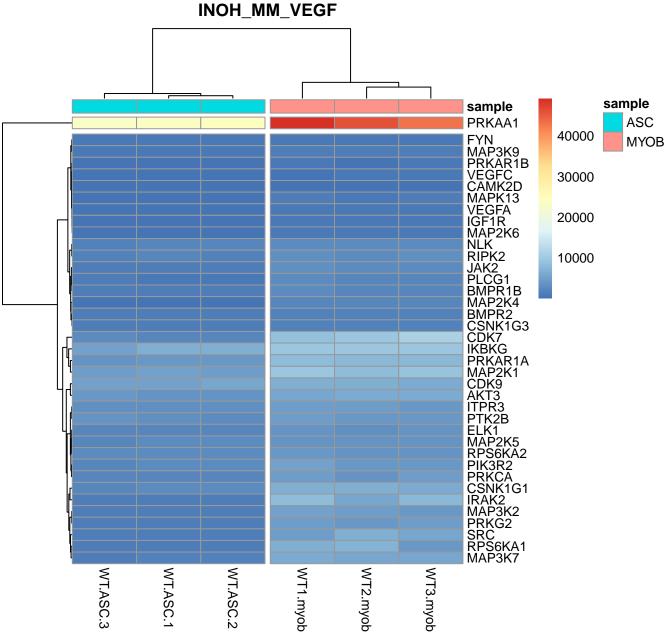
Expressed Matrix for genes active in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION

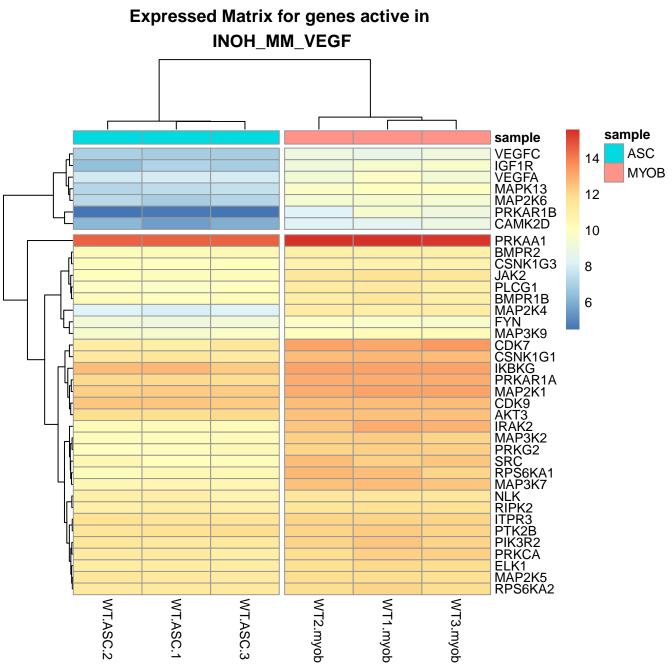


Scalling expressed matrix for genes active in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION



Expressed Matrix from Normalized for genes in





Scalling expressed matrix for genes active in INOH_MM_VEGF 1.5 sample sample PRKAR1B **ASC** 1 RIPK2 MYOB IRAK2 ELK1 0.5 MAP2K1 IGF1R PRKCA 0 PTK2B BMPR1B VEGFA PIK3R2 -0.5RPS6KA2 -1 NLK IKBKG CDK9 -1.5MAP3K9 MAPJK9 CSNK1G3 PRKG2 MAPK13 CAMK2D VEGFC CDK7 SRC BMPR2 AKT3 PLCG1 FYN RPS6KA1 MAP2K5 PRKAA1 MAP3K2 MAP3K7

WT.ASC.3

MAP3K/ JAK2 MAP2K6 PRKAR1A CSNK1G1 ITPR3 MAP2K4

WT3.myob