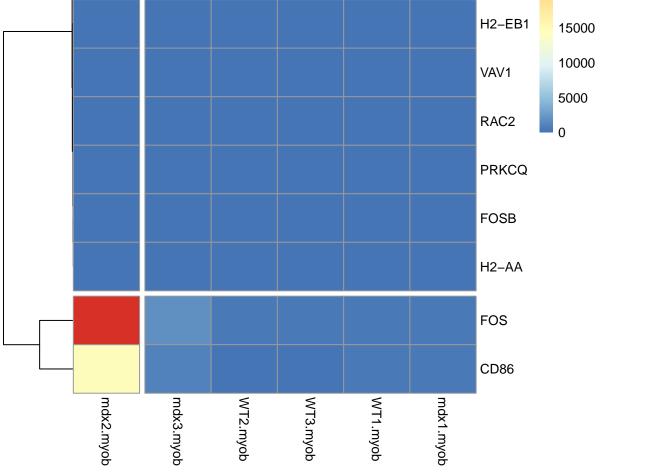
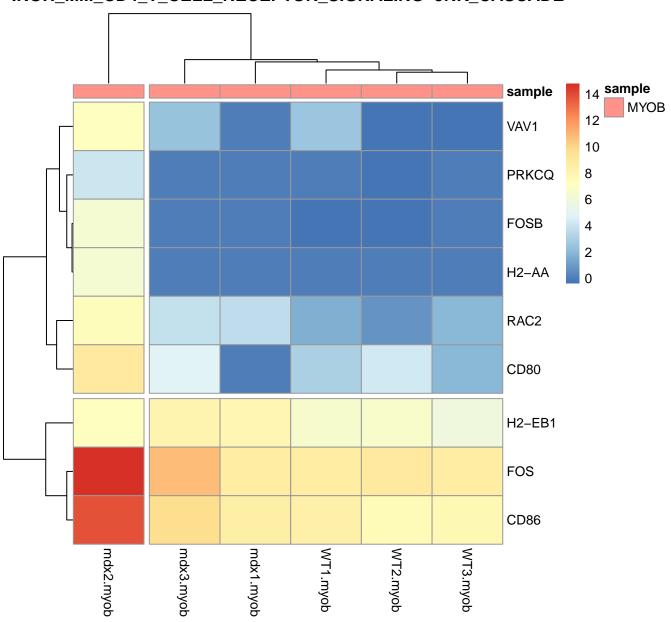
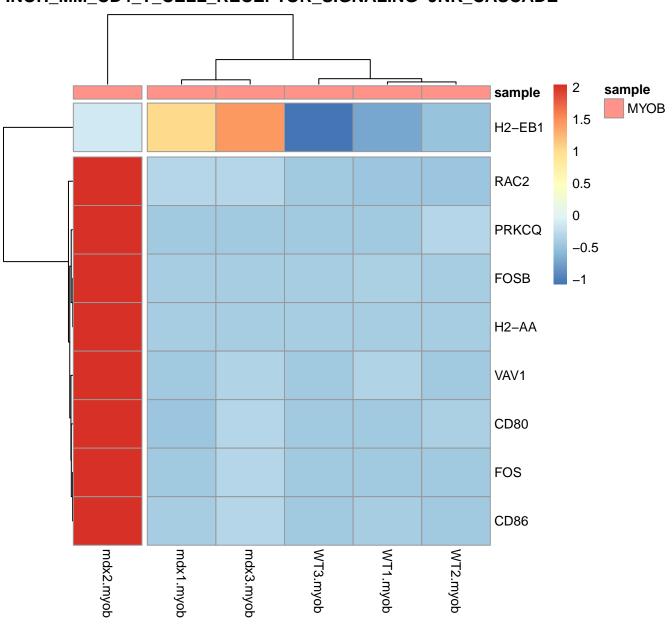
Expressed Matrix from Normalized for genes in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-JNK_CASCADE sample sample **MYOB** 25000 **CD80** 20000 H2-EB1 15000 10000 VAV1 5000 RAC2 **PRKCQ FOSB** H2-AA



Expressed Matrix for genes active in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-JNK_CASCADE



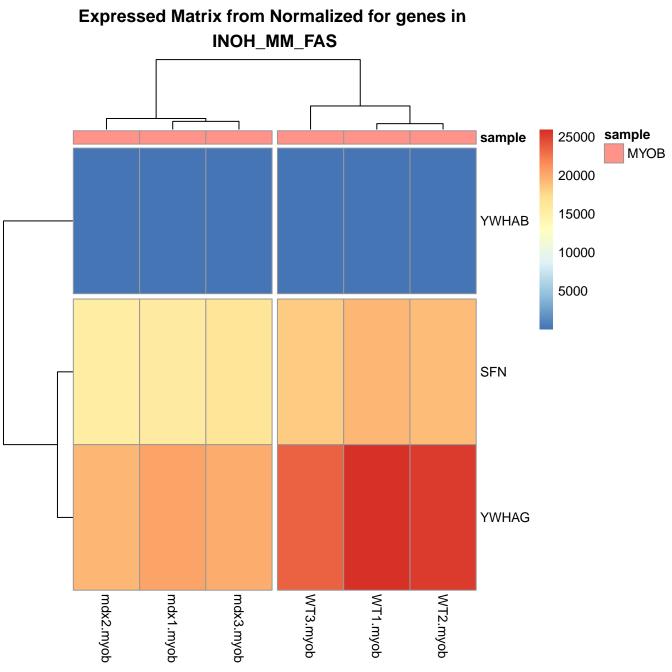
Scalling expressed matrix for genes active in INOH_MM_CD4_T_CELL_RECEPTOR_SIGNALING-JNK_CASCADE

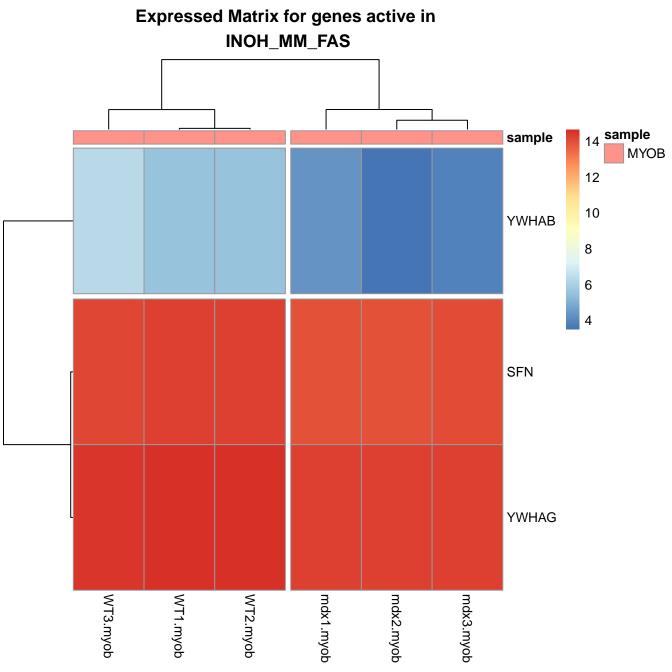


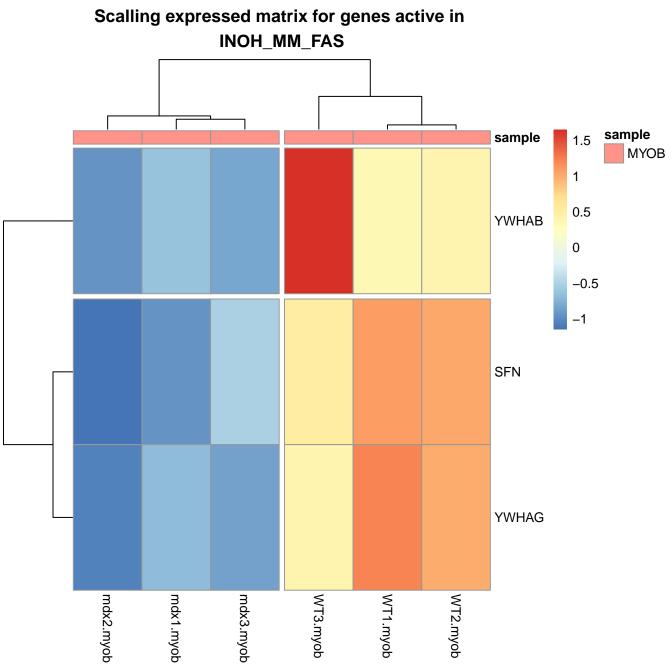
Expressed Matrix from Normalized for genes in INOH_MM_EGF sample sample 35000 MYOB 30000 **KRAS** 25000 **YWHAE** 20000 15000 **YWHAG** 10000 MAPK1 5000 0 MAP2K4 SFN SHC3 YWHAB SOS1 ELK1 mdx1.myob mdx3.myob WT3.myob WT1.myob WT2.myob

Expressed Matrix for genes active in INOH_MM_EGF sample sample 14 MYOB **YWHAB** 12 10 SOS1 8 6 ELK1 4 **YWHAE** 2 0 **KRAS** MAP2K4 SFN SHC3 **YWHAG** MAPK1 mdx1.myob mdx2.myob mdx3.myob WT3.myob WT1.myob WT2.myob

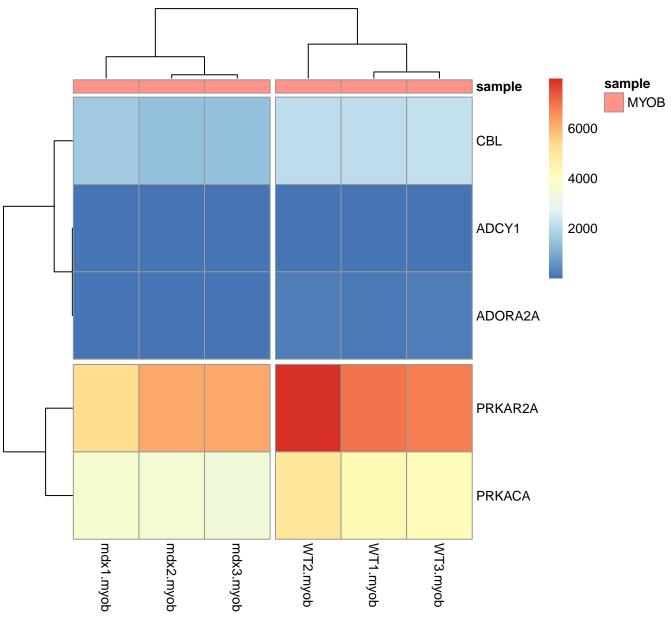
Scalling expressed matrix for genes active in INOH_MM_EGF sample sample 1.5 MYOB MAPK1 1 0.5 MAP2K4 0 **YWHAG** -0.5 -1 **YWHAE** -1.5 SFN **KRAS** SOS1 ELK1 **YWHAB** SHC3 mdx1.myob mdx2.myob mdx3.myob WT3.myob WT1.myob WT2.myob





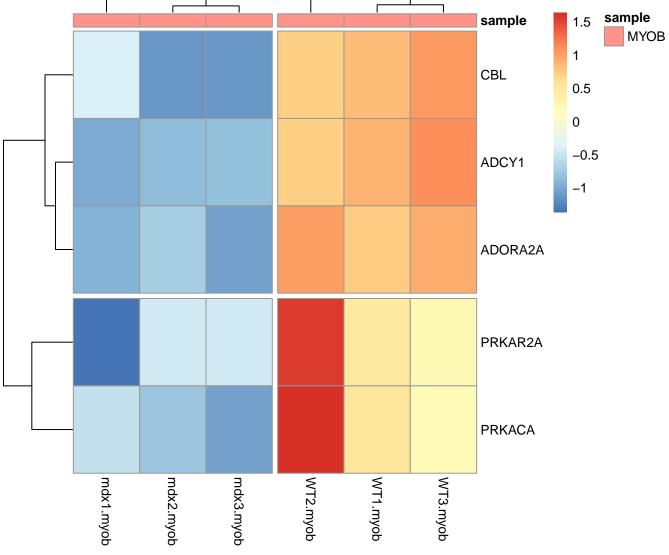


Expressed Matrix from Normalized for genes in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR

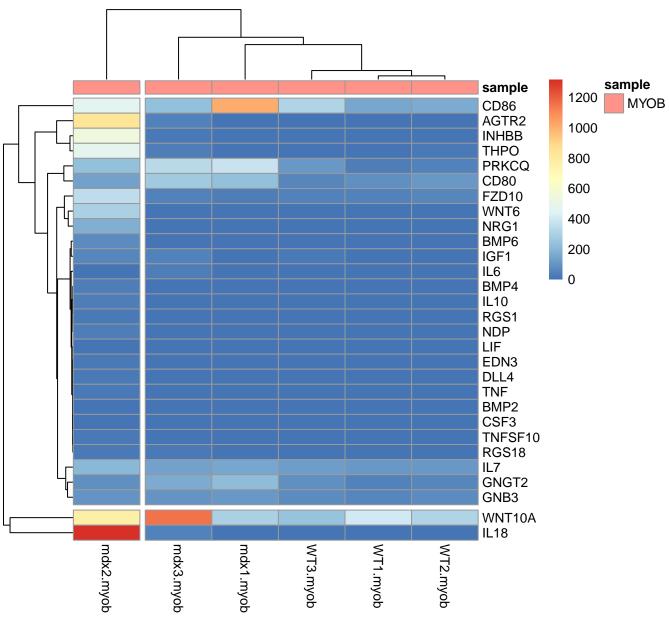


Expressed Matrix for genes active in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR sample sample 12 **MYOB** 10 **CBL** 8 6 PRKAR2A 4 2 **PRKACA** ADCY1 ADORA2A WT2.myob WT1.myob mdx3.myob mdx2.myob

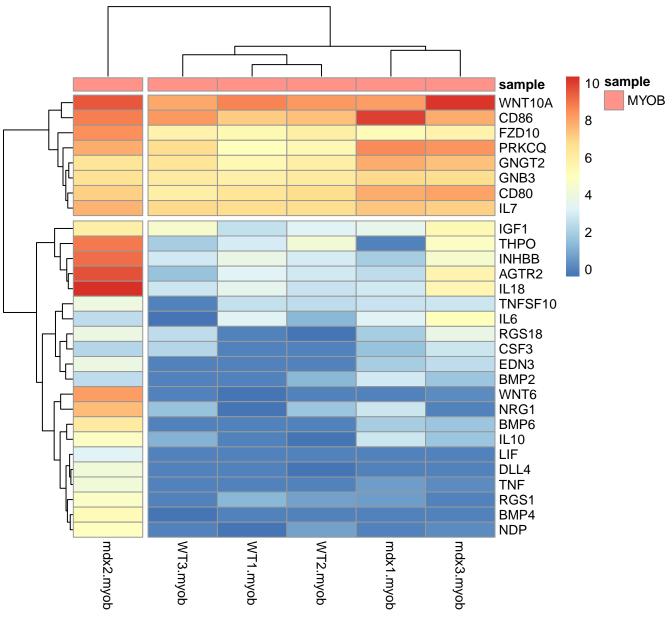
Scalling expressed matrix for genes active in INOH_MM_GPCR_ADENOSINE_A2A_RECEPTOR sample sample 1.5 1 **CBL** 0.5 0 -0.5 ADCY1 -1



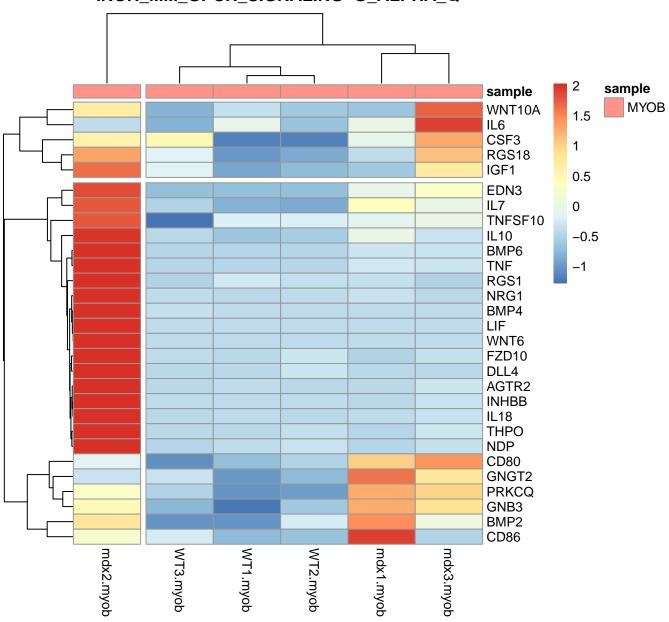
Expressed Matrix from Normalized for genes in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q



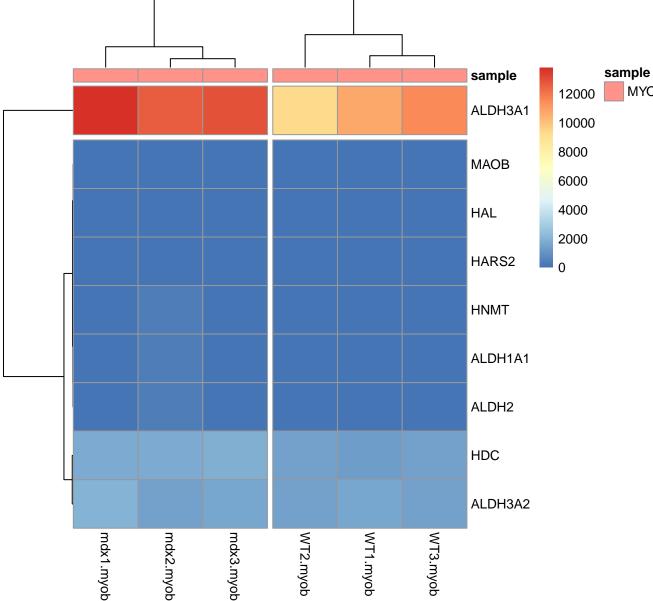
Expressed Matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q



Scalling expressed matrix for genes active in INOH_MM_GPCR_SIGNALING-G_ALPHA_Q

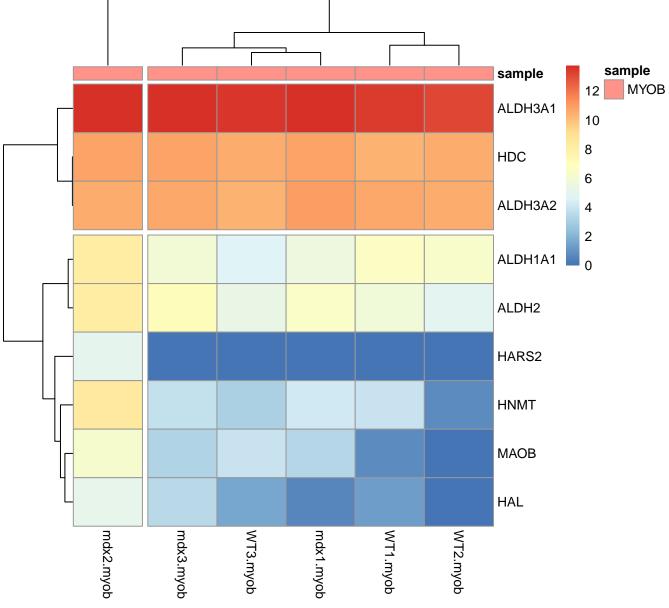


Expressed Matrix from Normalized for genes in INOH_MM_HISTIDINE_DEGRADATION



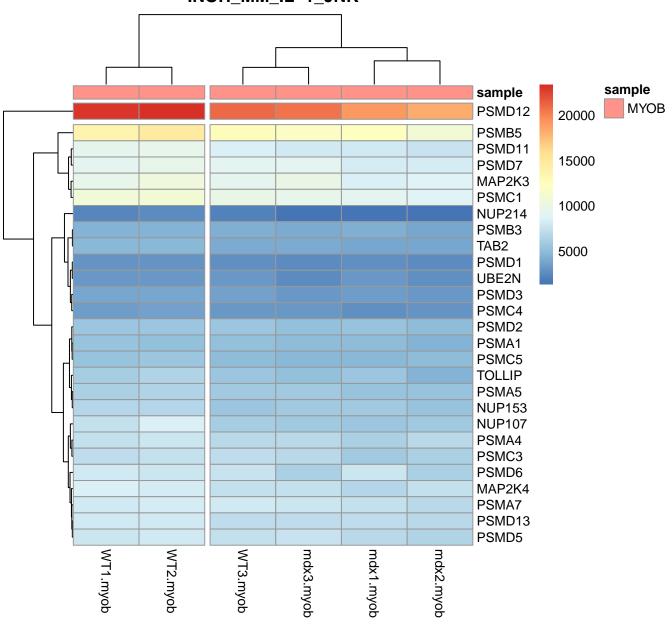
MYOB

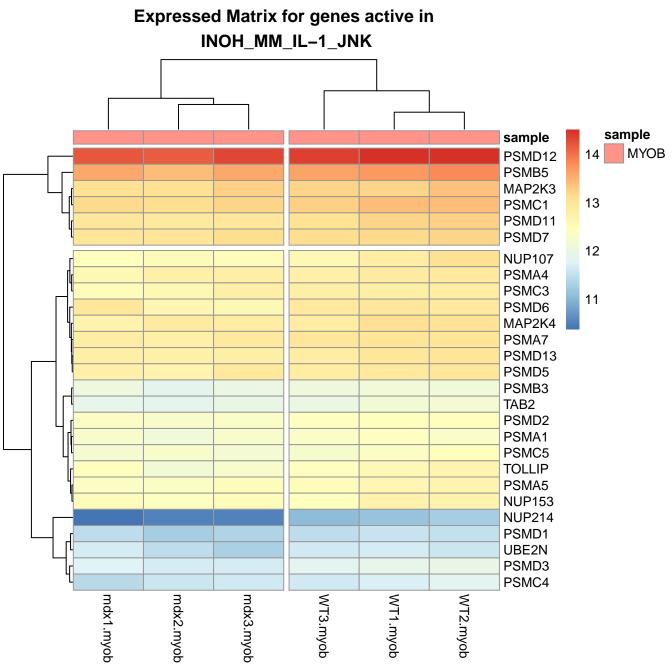
Expressed Matrix for genes active in INOH_MM_HISTIDINE_DEGRADATION



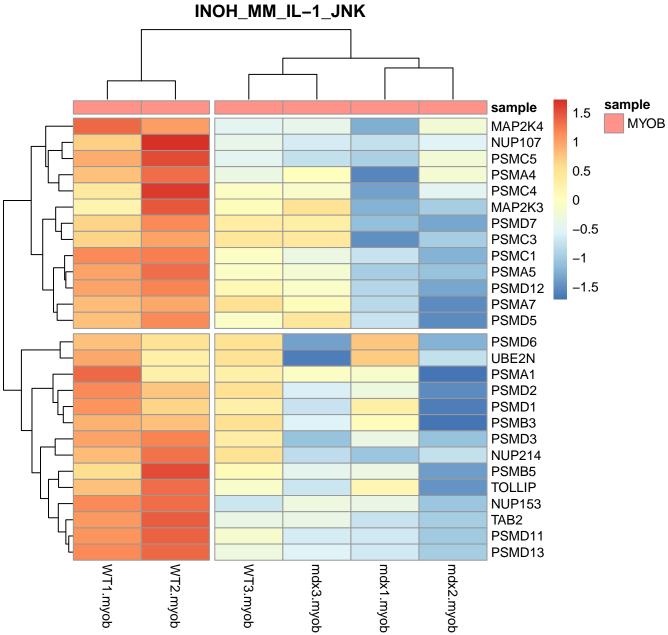
Scalling expressed matrix for genes active in INOH_MM_HISTIDINE_DEGRADATION 2 sample sample MYOB 1.5 ALDH1A1 1 0.5 MAOB 0 **HNMT** -0.5 -1 HARS2 -1.5 HAL ALDH2 ALDH3A2 HDC ALDH3A1 mdx2.myob WT3.myob WT1.myob WT2.myob mdx1.myob mdx3.myob

Expressed Matrix from Normalized for genes in INOH_MM_IL-1_JNK

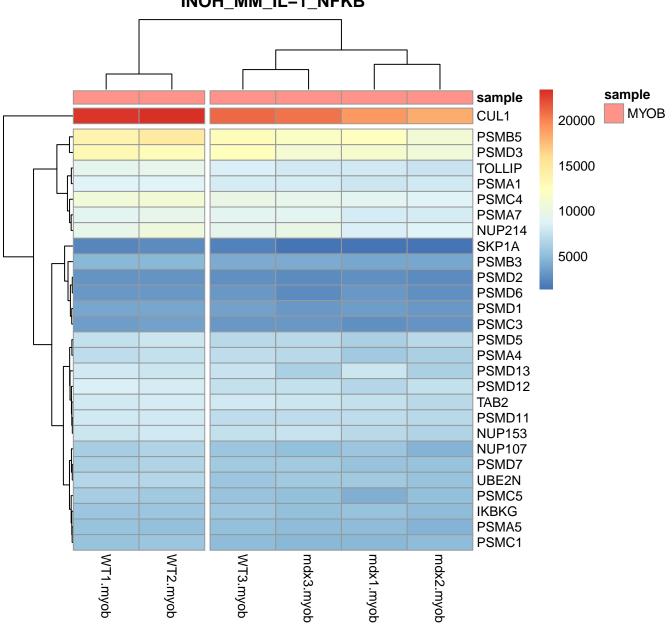




Scalling expressed matrix for genes active in



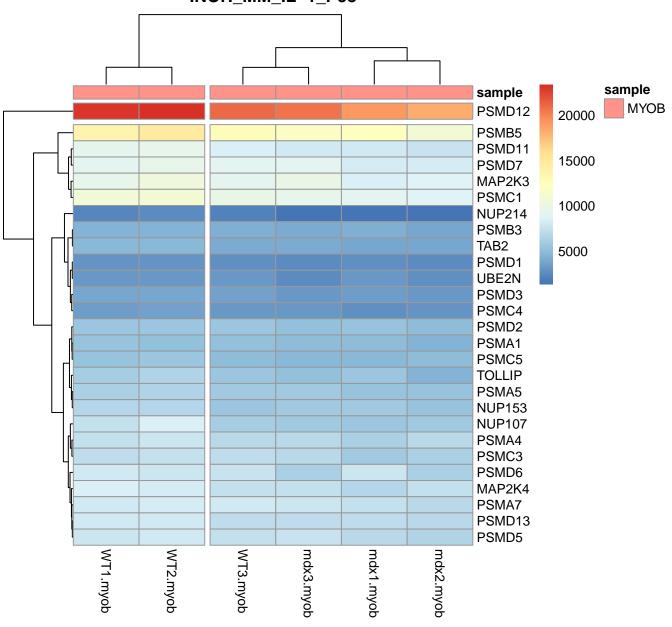
Expressed Matrix from Normalized for genes in INOH_MM_IL-1_NFKB

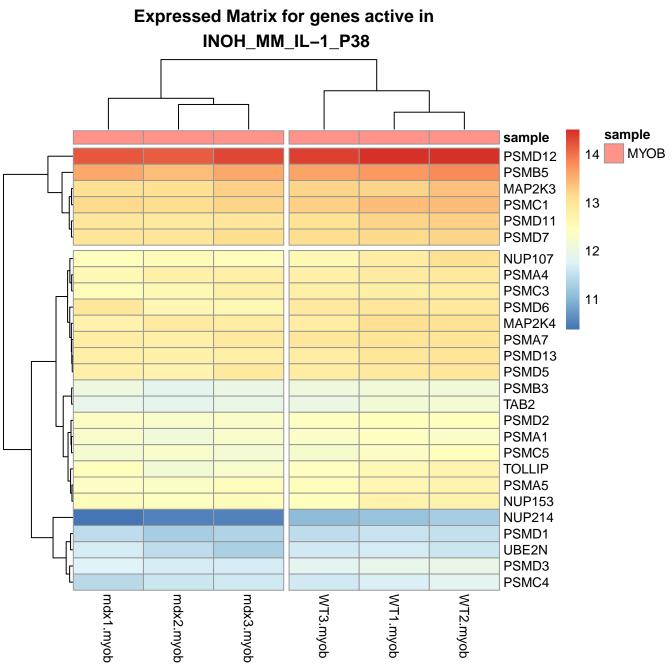


Expressed Matrix for genes active in INOH_MM_IL-1_NFKB sample sample **MYOB** 14 SKP1A PSMD2 PSMD6 PSMD1 13 PSMC3 CUL1 12 PSMB5 PSMD3 PSMB3 11 **NUP107** PSMD7 UBE2N PSMC5 **IKBKG** PSMA5 PSMC1 PSMD5 PSMA4 PSMD13 PSMD12 TAB2 PSMD11 NUP153 **NUP214** PSMC4 PSMA7 **TOLLIP** PSMA1 mdx1.myob mdx2.myob mdx3.myob WT3.myob WT1.myob WT2.myob

Scalling expressed matrix for genes active in INOH_MM_IL-1_NFKB sample 1.5 sample **MYOB** PSMD12 1 PSMA1 PSMC5 0.5 PSMC1 PSMD5 0 PSMC3 **NUP214** -0.5PSMA7 PSMA4 -1 PSMC4 PSMD7 -1.5CUL₁ TAB2 **NUP153** PSMD13 PSMD6 **IKBKG** PSMD3 PSMD2 PSMA5 PSMD1 SKP1A PSMB5 **NUP107** UBE2N PSMB3 **TOLLIP** PSMD11 WT1.myob WT2.myob WT3.myob mdx1.myob mdx3.myob mdx2.myob

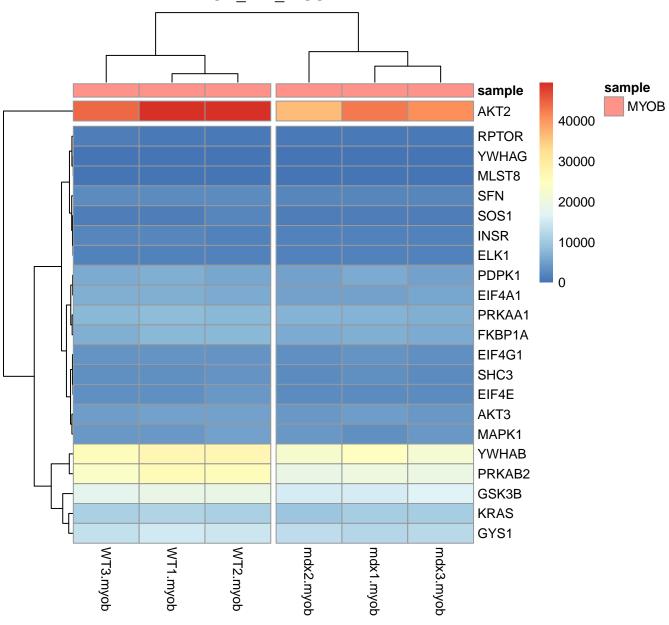
Expressed Matrix from Normalized for genes in INOH_MM_IL-1_P38

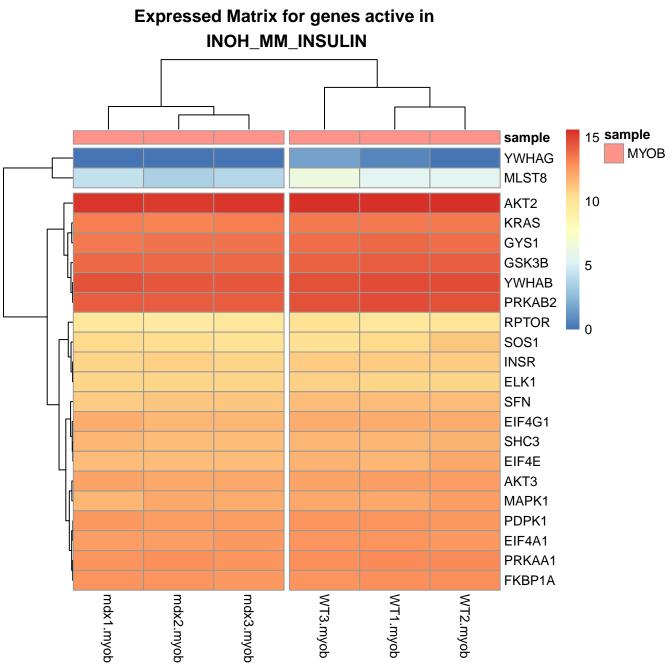




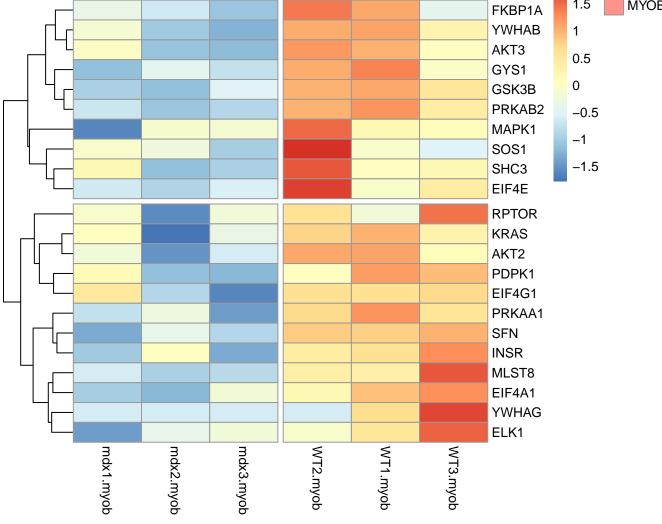
Scalling expressed matrix for genes active in INOH_MM_IL-1_P38 sample sample 1.5 **MYOB** MAP2K4 **NUP107** 1 PSMC5 0.5 PSMA4 PSMC4 0 MAP2K3 PSMD7 -0.5PSMC3 PSMC1 -1 PSMA5 -1.5PSMD12 PSMA7 PSMD5 PSMD6 UBE2N PSMA1 PSMD2 PSMD1 PSMB3 PSMD3 **NUP214** PSMB5 **TOLLIP NUP153** TAB2 PSMD11 PSMD13 WT1.myob WT2.myob WT3.myob mdx1.myob mdx3.myob mdx2.myob

Expressed Matrix from Normalized for genes in INOH_MM_INSULIN

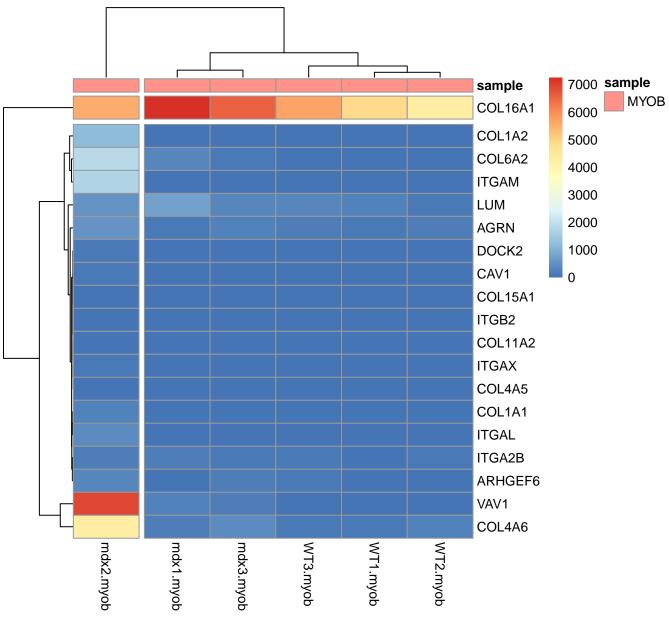




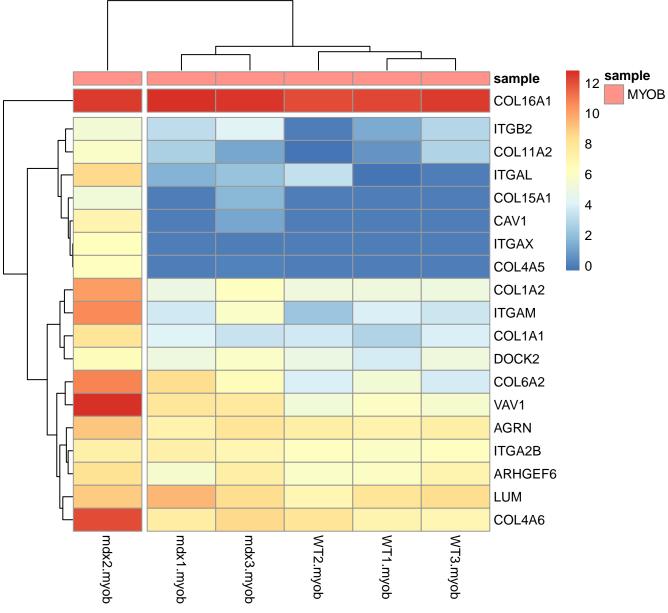
Scalling expressed matrix for genes active in INOH_MM_INSULIN sample sample 1.5 MYOB FKBP1A **YWHAB** 1 AKT3 0.5 GYS1 0 GSK3B PRKAB2 -0.5MAPK1 -1 SOS1 -1.5 SHC3 EIF4E **RPTOR KRAS** AKT2 PDPK1 EIF4G1 PRKAA1



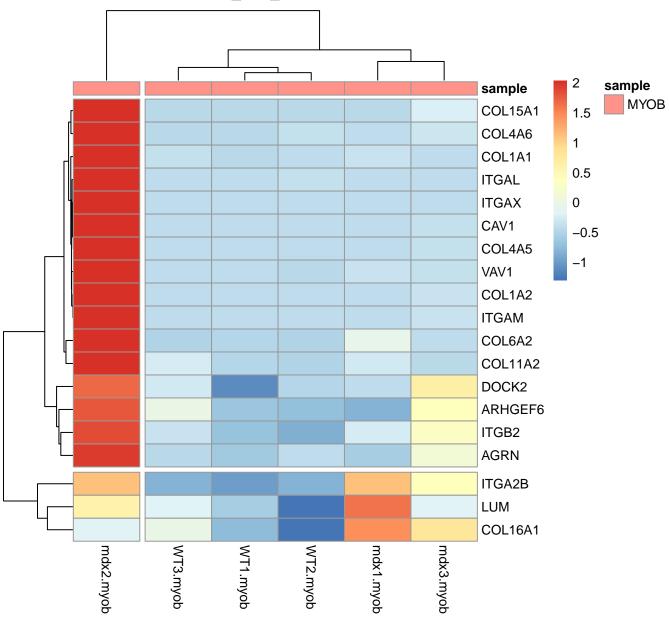
Expressed Matrix from Normalized for genes in INOH_MM_INTEGRIN



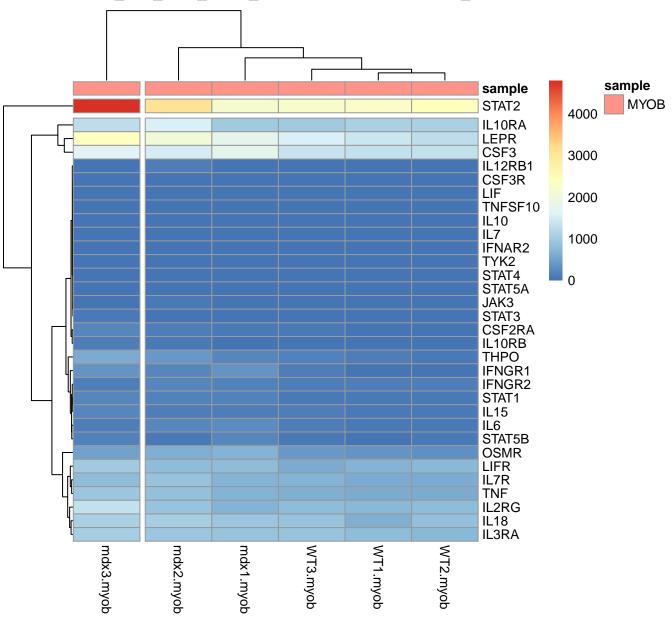
Expressed Matrix for genes active in INOH_MM_INTEGRIN



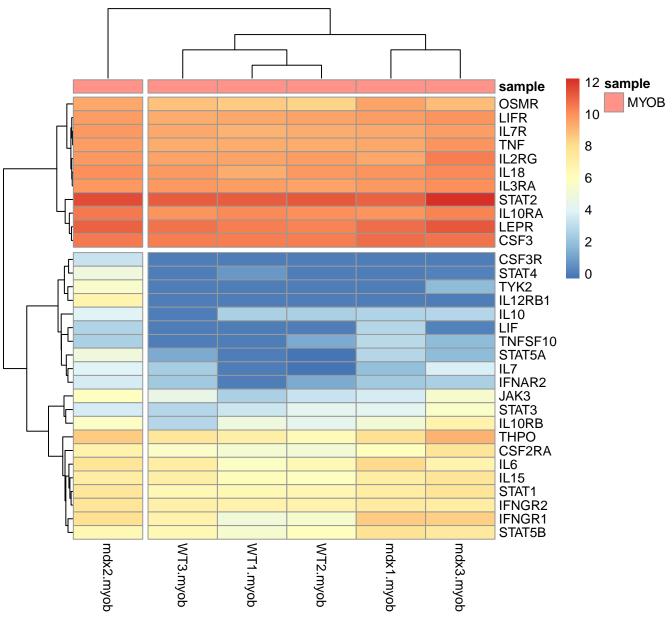
Scalling expressed matrix for genes active in INOH_MM_INTEGRIN



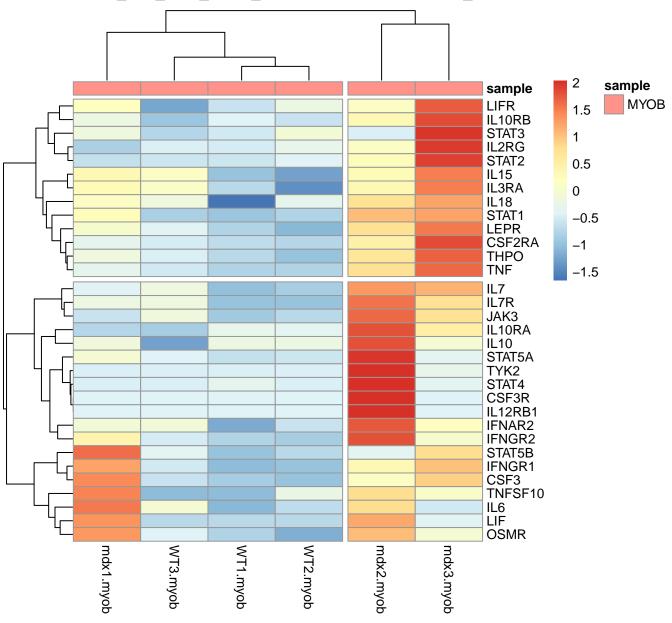
Expressed Matrix from Normalized for genes in INOH_MM_JAK_STAT_MOLECULARVARIATION_1



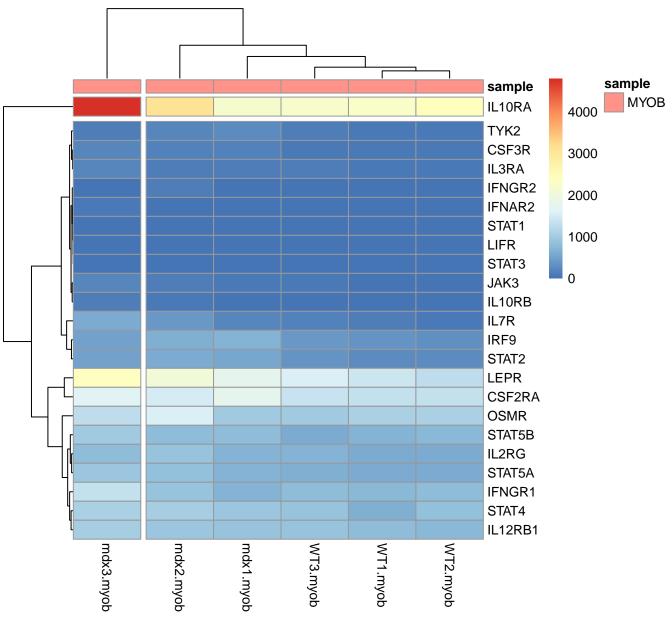
Expressed Matrix for genes active in INOH_MM_JAK_STAT_MOLECULARVARIATION_1



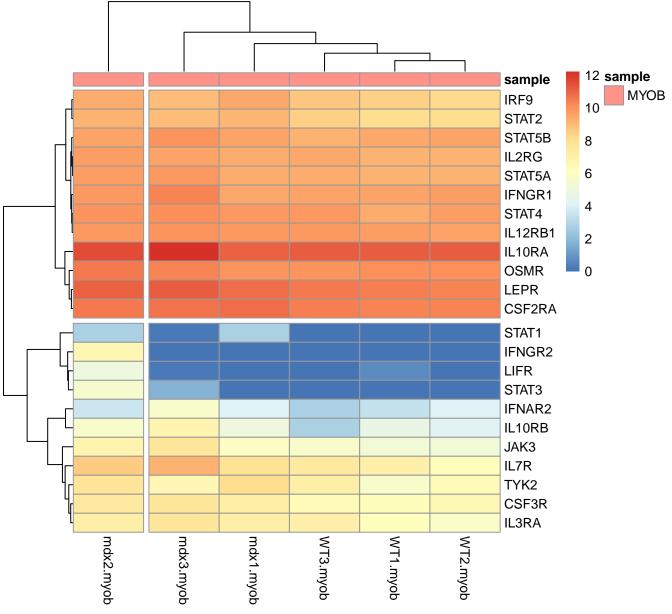
Scalling expressed matrix for genes active in INOH_MM_JAK_STAT_MOLECULARVARIATION_1



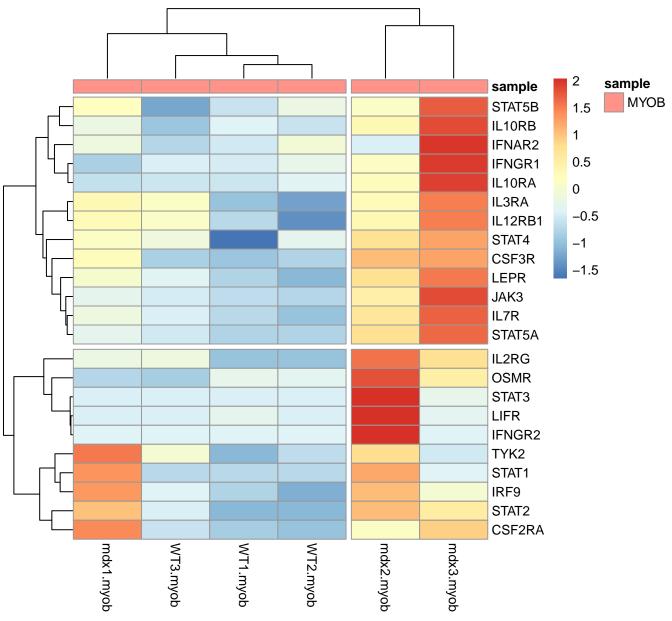
Expressed Matrix from Normalized for genes in INOH_MM_JAK_STAT_MOLECULARVARIATION_2



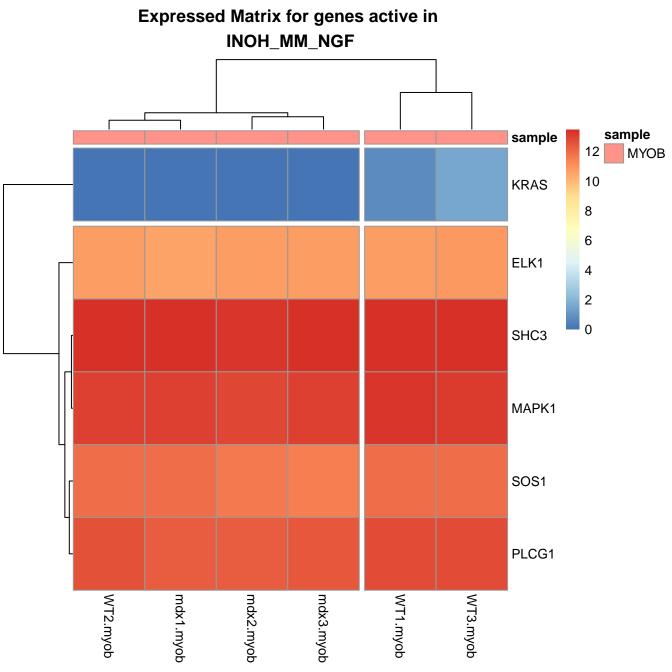
Expressed Matrix for genes active in INOH_MM_JAK_STAT_MOLECULARVARIATION_2

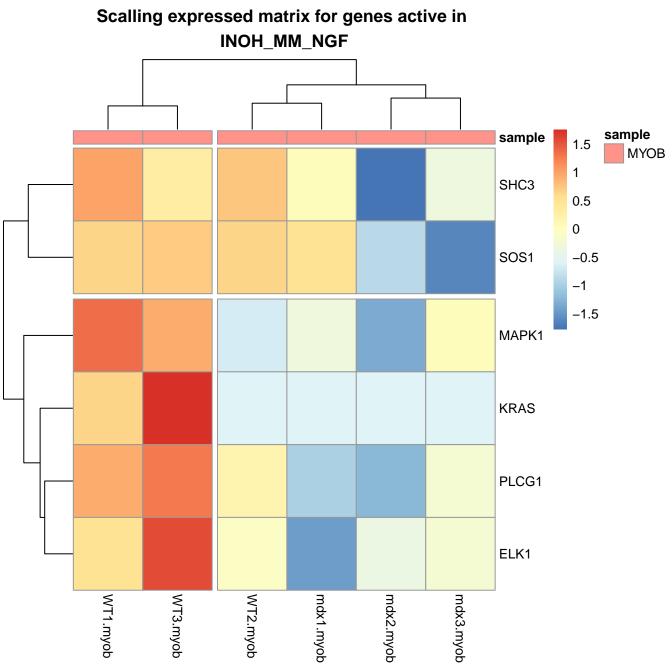


Scalling expressed matrix for genes active in INOH_MM_JAK_STAT_MOLECULARVARIATION_2

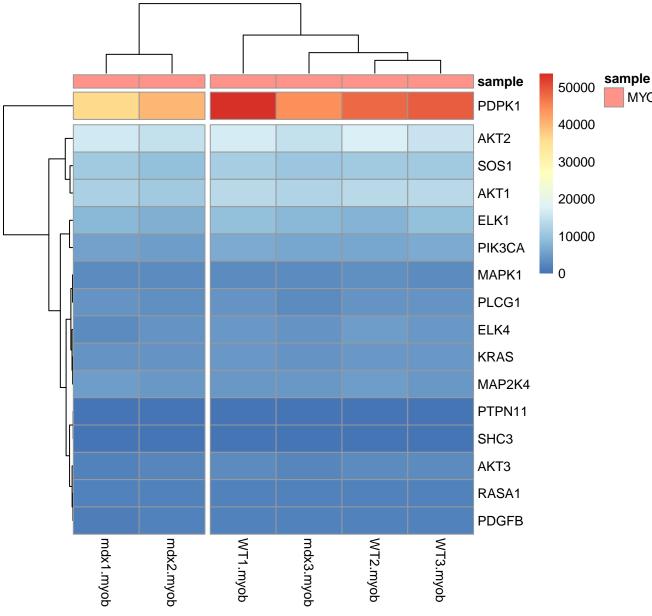


Expressed Matrix from Normalized for genes in INOH_MM_NGF sample sample MYOB 10000 SHC3 8000 6000 MAPK1 4000 2000 0 KRAS ELK1 SOS1 PLCG1 mdx2.myob WT1.myob WT3.myob mdx3.myob mdx1.myob





Expressed Matrix from Normalized for genes in INOH_MM_PDGF



MYOB

Expressed Matrix for genes active in INOH_MM_PDGF 15 sample sample MYOB AKT3 RASA1 10 **PDGFB** MAPK1 5 PLCG1 ELK4 **KRAS** MAP2K4 PDPK1 ELK1 PIK3CA AKT2 SOS1 AKT1 PTPN11 SHC3 mdx1.myob mdx3.myob mdx2.myob WT1.myob WT3.myob

Scalling expressed matrix for genes active in INOH_MM_PDGF sample sample 1.5 MYOB SHC3 1 ELK4 0.5 AKT2 0 MAPK1 -0.5 PLCG1 -1 **KRAS** -1.5 SOS1 RASA1 MAP2K4 AKT3 PDPK1 PTPN11 **PDGFB** ELK1 AKT1 PIK3CA WT2.myob WT1.myob WT3.myob mdx2.myob mdx3.myob mdx1.myob

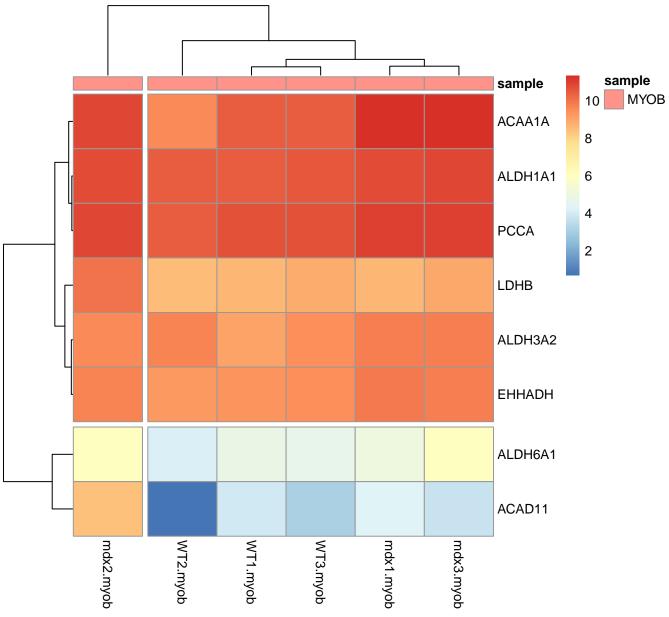
Expressed Matrix from Normalized for genes in INOH_MM_PENTOSE_PHOSPHATE_CYCLE sample sample 16000 MYOB 14000 H6PD 12000 10000 GPI1 8000 6000 **UMPS** 4000 2000 **PFKL** TALDO1 **TKT PGD PPAT** WT1.myob WT2.myob mdx2.myob WT3.myob mdx1.myob mdx3.myob

Expressed Matrix for genes active in INOH_MM_PENTOSE_PHOSPHATE_CYCLE 14 sample sample **MYOB** 13.5 **PFKL** 13 12.5 TALDO1 12 **TKT** 11.5 11 **PGD PPAT UMPS** H6PD GPI1 WT2.myob mdx1.myob mdx3.myob WT3.myob mdx2.myob WT1.myob

Scalling expressed matrix for genes active in INOH_MM_PENTOSE_PHOSPHATE_CYCLE sample sample 1.5 MYOB TKT 1 0.5 **PPAT** 0 -0.5 TALDO1 -1 -1.5 GPI1 **PFKL UMPS** PGD H6PD WT1.myob WT2.myob WT3.myob mdx1.myob mdx3.myob

Expressed Matrix from Normalized for genes in INOH_MM_PROPANOATE_METABOLISM 2500 sample sample MYOB ACAA1A 2000 1500 ALDH1A1 1000 **PCCA** 500 ALDH6A1 ACAD11 **LDHB** ALDH3A2 **EHHADH** WT2.myob WT1.myob WT3.myob mdx2.myob mdx1.myob mdx3.myob

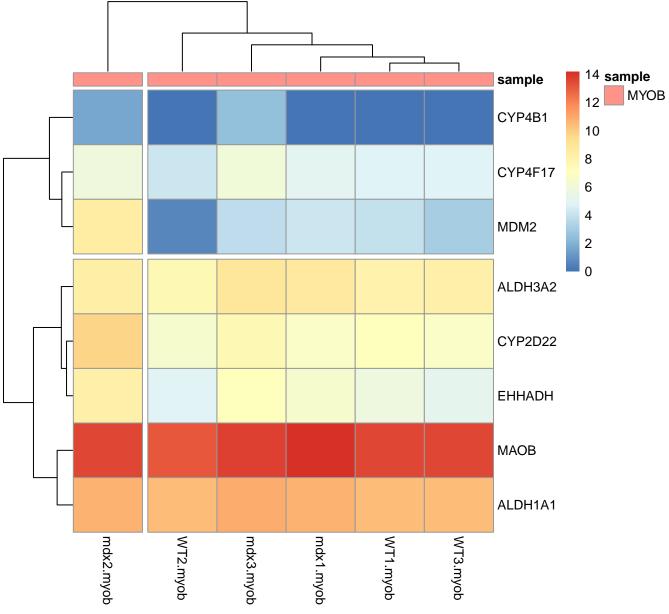
Expressed Matrix for genes active in INOH_MM_PROPANOATE_METABOLISM



Scalling expressed matrix for genes active in INOH_MM_PROPANOATE_METABOLISM 2 sample sample MYOB 1.5 LDHB 1 0.5 ACAD11 0 -0.5 ALDH3A2 -1 -1.5**EHHADH** ACAA1A **PCCA** ALDH1A1 ALDH6A1 WT1.myob WT2.myob WT3.myob mdx2.myob mdx3.myob mdx1.myob

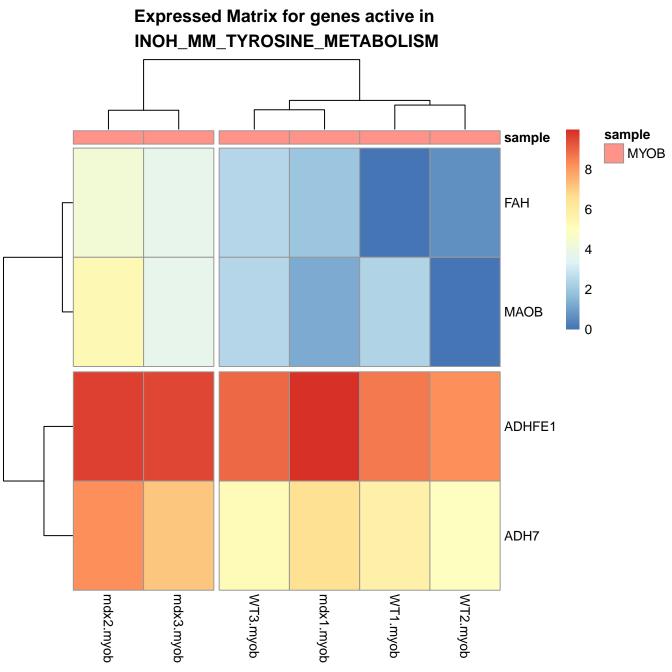
Expressed Matrix from Normalized for genes in INOH_MM_TRYPTOPHAN_DEGRADATION sample sample MYOB 15000 MAOB 10000 ALDH1A1 5000 CYP4F17 0 CYP4B1 MDM2 **EHHADH** CYP2D22 ALDH3A2 mdx1.myob WT2.myob WT1.myob WT3.myob mdx3.myob mdx2.myob

Expressed Matrix for genes active in INOH_MM_TRYPTOPHAN_DEGRADATION



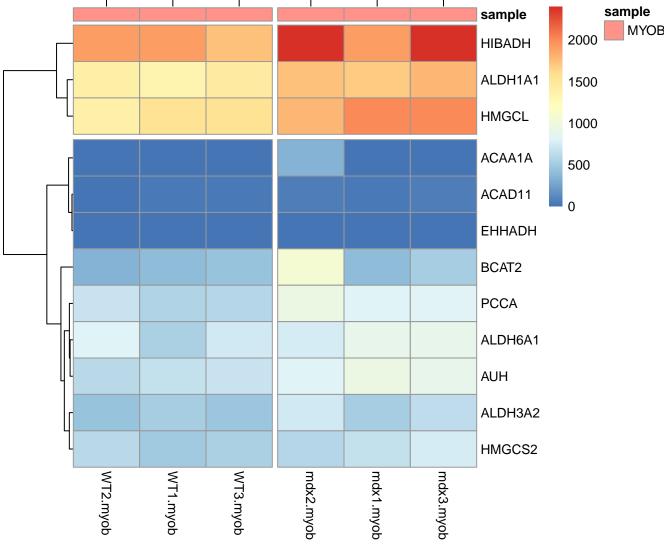
Scalling expressed matrix for genes active in INOH_MM_TRYPTOPHAN_DEGRADATION 2 sample sample MYOB 1.5 MAOB 1 0.5 **EHHADH** 0 -0.5CYP2D22 -1 MDM2 CYP4F17 CYP4B1 ALDH1A1 ALDH3A2 mdx2.myob WT2.myob WT1.myob WT3.myob mdx1.myob mdx3.myob

Expressed Matrix from Normalized for genes in INOH_MM_TYROSINE_METABOLISM 1000 sample sample MYOB 800 ADHFE1 600 400 200 ADH7 0 FAH MAOB WT3.myob WT1.myob WT2.myob mdx1.myob mdx3.myob

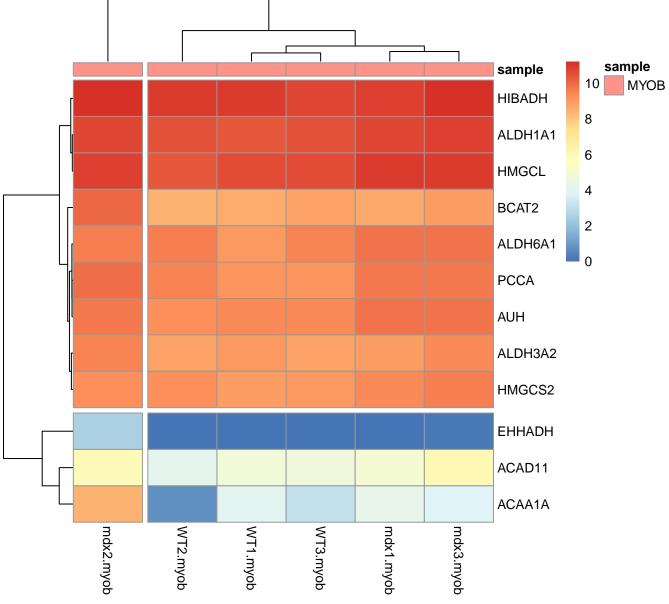


Scalling expressed matrix for genes active in INOH_MM_TYROSINE_METABOLISM sample sample MYOB 1.5 1 ADHFE1 0.5 0 -0.5 FAH -1 MAOB ADH7 mdx2.myob WT3.myob WT1.myob WT2.myob mdx1.myob mdx3.myob

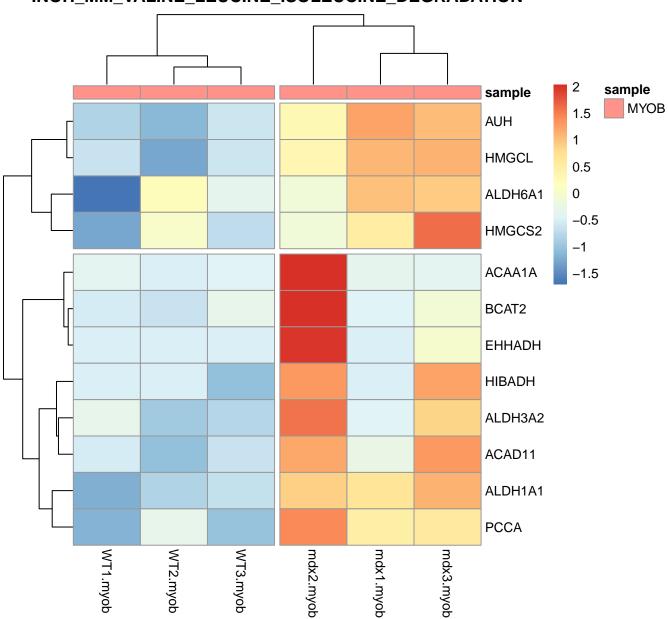
Expressed Matrix from Normalized for genes in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION sample sample MYOB 2000 HIBADH ALDH1A1 1500 HMGCL 1000 ACAA1A 500 ACAD11 0 **EHHADH** BCAT2 **PCCA** ALDH6A1



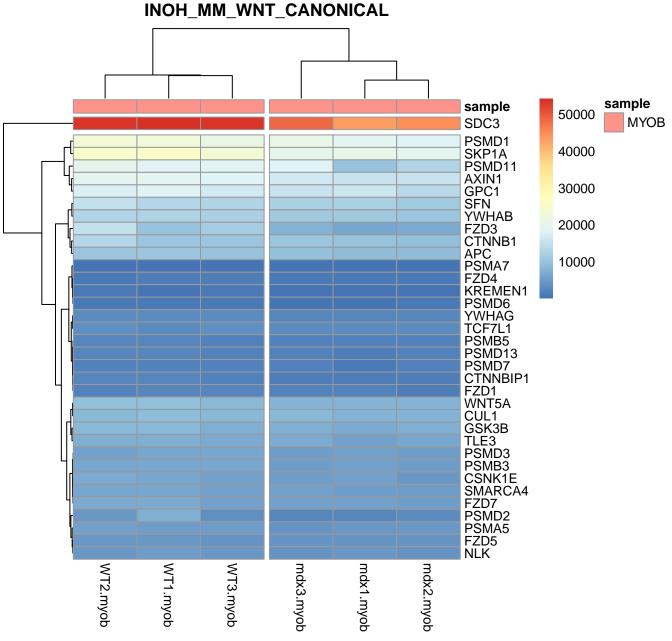
Expressed Matrix for genes active in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION

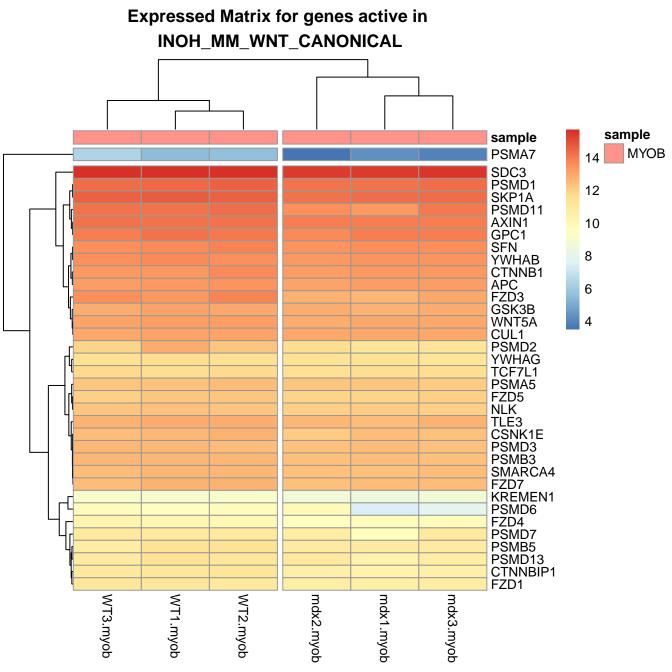


Scalling expressed matrix for genes active in INOH_MM_VALINE_LEUCINE_ISOLEUCINE_DEGRADATION



Expressed Matrix from Normalized for genes in





Scalling expressed matrix for genes active in INOH_MM_WNT_CANONICAL sample sample MYOB PSMD7 PSMD11 TLE3 1 KREMEN1 SDC3 PSMD6 NLK 0 **YWHAG** PSMD2 CUL1 GSK3B -1 PSMD13 PSMD3 PSMB3 FZD4 FZD1 TCF7L1 PSMA7 PSMB5 FZD7 SFN CSNK1E FZD5 WNT5A APC SMARCA4 PSMD1 GPC1 AXIN1 **YWHAB** SKP1A CTNNB1 PSMA5 FZD3 CTNNBIP1 mdx1.myob mdx2.myob mdx3.myob