

**Table 1: Metabolic related genes differentially expressed in GBM at the RNA level**

Up-regulated		Down-regulated	
Primary Metabolic Process	Gene	Primary Metabolic Process	Gene
Glucose Metabolism	FABP5 HK2 ITGB1 MSTN MYC PRKAA1 ZBTB20 IDH1	Glucose Metabolism	ALDH5A1 BDNF CACNA1A NISCH NPY1R PDK2 PDK4 HK1 IDH3a
Fatty Acid Metabolism	ACOT9 ALOX5 ALOX15B ALOX5AP CAV1 CD36 CD74 CEBPB CROT DBI EDN2 ELOVL2 FABP4 FCER1A GGT5 LPL PDPN PECI PLA2G5 PTGS1 QKI SLC27A3 SUCLG2 SYK TNFRSF1A TNXB	Fatty Acid Metabolism	AACS ACOT7 ACSL6 AKR1C2 ALDH5A1 ANGPTL3 ANKRD26 FAAH HNF4A MYO5A OXCT1 PDK4 PLP1 PRKAR2B SCD SLC27A2 SNCA
Glutamine Metabolism	DDAH2 GFPT2 MECP2	Glutamine Metabolism	ALDH5A1 GLS GLUD1 GLUD2
Nucleotide Metabolism	ADA REXO2 TYMP UPP1	Nucleotide Metabolism	CSGALNACT1 ENTPD3 UGP2

**Supplemental Table: TCGA samples used in analysis**

<b>Normal Brain Sample ID</b>	<b>GBM Sample ID</b>
TCGA-06-0673-11	TCGA-06-0192-01
TCGA-06-0675-11	TCGA-06-0649-01
TCGA-06-0676-11	TCGA-06-0686-01
TCGA-06-0678-11	TCGA-06-0743-01
TCGA-06-0680-11	TCGA-06-0744-01
TCGA-06-0681-11	TCGA-06-0745-01
TCGA-08-0623-11	TCGA-06-0747-01
TCGA-08-0625-11	TCGA-06-0749-01
TCGA-08-0626-11	TCGA-06-0750-01
TCGA-08-0627-11	TCGA-12-0654-01
	TCGA-12-0656-01
	TCGA-12-0657-01
	TCGA-12-0688-01
	TCGA-12-0692-01
	TCGA-12-0703-01
	TCGA-12-0707-01
	TCGA-12-0772-01
	TCGA-12-0773-01
	TCGA-12-0775-01
	TCGA-12-0776-01
	TCGA-12-0778-01
	TCGA-12-0780-01
	TCGA-15-0742-01
	TCGA-06-0216-01A
	TCGA-06-0216-01B