

**Supplementary**

**Table S1** 62 genes related to glycolysis Gluconeogenesis signaling pathway were extracted from MSigDB website

<i>ENO2</i>	<i>ADH4</i>	<i>GAPDH</i>	<i>FBP2</i>
<i>ALDH3A2</i>	<i>G6PC2</i>	<i>HK2</i>	<i>HK3</i>
<i>ALDH3B1</i>	<i>DLD</i>	<i>PDHA1</i>	<i>PDHB</i>
<i>LDHAL6A</i>	<i>ADH7</i>	<i>LDHB</i>	<i>DLAT</i>
<i>ALDH7A1</i>	<i>ALDOA</i>	<i>G6PC</i>	<i>ACSS2</i>
<i>PDHA2</i>	<i>ALDOB</i>	<i>PFKF</i>	<i>AKR1A1</i>
<i>PFKL</i>	<i>PCK1</i>	<i>PGK2</i>	<i>PKLR</i>
<i>PGAM4</i>	<i>PKM</i>	<i>ALDOC</i>	<i>ENO1</i>
<i>ALDH9A1</i>	<i>ADH5</i>	<i>PGM1</i>	<i>GALM</i>
<i>ALDH1B1</i>	<i>ACSS1</i>	<i>FBP1</i>	<i>PGM2</i>
<i>GPI</i>	<i>ALDH1A3</i>	<i>PGAM2</i>	<i>LDHA</i>
<i>PGAM1</i>	<i>ALDH3A1</i>	<i>TPI1</i>	<i>BPGM</i>
<i>LDHC</i>	<i>HK1</i>	<i>PCK2</i>	<i>ADH1A</i>
<i>LDHAL6B</i>	<i>ADH6</i>	<i>PGK1</i>	<i>ADH1C</i>
<i>ENO3</i>	<i>ALDH2</i>	<i>PFKM</i>	<i>ADH1B</i>
<i>ALDH3B2</i>	<i>GCK</i>		

**Table S2** Pathways associated with *PFKM*, *DLAT*, *PKLR*, *PGM2*, *LDHA*, *BPGM*, *ADH1A*, and *ADH1C* genes

KEGG_CYTOKINE_CYTOKINE_RECEPTOR_INTERACTION
KEGG_CHEMOKINE_SIGNALING_PATHWAY
KEGG_JAK_STAT_SIGNALING_PATHWAY
KEGG_CELL_ADHESION_MOLECULES_CAMS
KEGG_HEMATOPOIETIC_CELL_LINEAGE
KEGG_FC_GAMMA_R_MEDIATED_PHAGOCYTOSIS
KEGG_ANTIGEN_PROCESSING_AND_PRESENTATION
KEGG_TOLL_LIKE_RECEPTOR_SIGNALING_PATHWAY
KEGG_COMPLEMENT_AND_COAGULATION_CASCADES
KEGG_GLYCOLYSIS_GLUONEOGENESIS
KEGG_LEISHMANIA_INFECTION
KEGG_ALLOGRAFT_REJECTION
KEGG_GRAFT_VERSUS_HOST_DISEASE
KEGG_INTESTINAL_IMMUNE_NETWORK_FOR_IGA_PRODUCTION
KEGG_SYSTEMIC_LUPUS_ERYTHEMATOSUS
KEGG_AUTOIMMUNE_THYROID_DISEASE
KEGG_TYPE_I_DIABETES_MELLITUS
KEGG_AXON_GUIDANCE
KEGG_TYROSINE_METABOLISM
KEGG_NATURAL_KILLER_CELL_MEDIATED_CYTOTOXICITY
KEGG_ASTHMA
KEGG_NEUROACTIVE_LIGAND_RECEPTOR_INTERACTION
KEGG_VIRAL_MYOCARDITIS
KEGG_PRION_DISEASES
KEGG_GLYCOSAMINOGLYCAN_BIOSYNTHESIS_HEPARAN_SULFATE
KEGG_DRUG_METABOLISM_CYTOCHROME_P450
KEGG_METABOLISM_OF_XENOBIOTICS_BY_CYTOCHROME_P450
KEGG_FATTY_ACID_METABOLISM
KEGG_PRIMARY_IMMUNODEFICIENCY
KEGG_NOD_LIKE_RECEPTOR_SIGNALING_PATHWAY
KEGG_RETINOL_METABOLISM
KEGG_TASTE_TRANSDUCTION
KEGG_ARACHIDONIC_ACID_METABOLISM
KEGG_AMINOACYL_TRNA_BIOSYNTHESIS
KEGG_ECM_RECEPTOR_INTERACTION
KEGG_LEUKOCYTE_TRANSENDOTHELIAL_MIGRATION
KEGG_CYTOSOLIC_DNA_SENSING_PATHWAY
KEGG_ETHER_LIPID_METABOLISM
KEGG_RIBOSOME
KEGG_PPAR_SIGNALING_PATHWAY