Treatment CLK1 Exon 4 Morpholino Non-targeting Morpholino **GSVA Scores** -1 -0.5 0 0.5 1 Treatment TYPE I DIABETES MELLITUS
GLYCOSAMINOGLYCAN BIOSYNTHESIS CHONDROITIN SULFATE
GLYCOSAMINOGLYCAN DEGRADATION
STEROID HORMONE BIOSYNTHESIS
NON HOMOLOGOUS END JOINING PANTOTHENATE AND COA BIOSYNTHESIS SELENOAMINO ACID METABOLISM TAURINE AND HYPOTAURINE METABOLISM TASTE TRANSDUCTION **AXON GUIDANCE** TYROSINE METABOLISM VIRAL MYOCARDITIS HISTIDINE METABOLISM REGULATION OF AUTOPHAGY NATURAL KILLER CELL MEDIATED CYTOTOXICITY NITROGEN METABOLISM FRUCTOSE AND MANNOSE METABOLISM DRUG METABOLISM OTHER ENZYMES GLYCOSAMINOGLYCAN BIOSYNTHESIS KERATAN SULFATE CIRCADIAN RHYTHM MAMMAL PRIMARY IMMUNODEFICIENCY GLYCOSPHINGOLIPID BIOSYNTHESIS LACTO AND NEOLACTO SERIES METABOLISM OF XENOBIOTICS BY CYTOCHROME P450 LINOLEIC ACID METABOLISM RETINOL METABOLISM AUTOIMMUNE THYROID DISEASE ALLOGRAFT REJECTION **ASTHMA** GLYCOSPHINGOLIPID BIOSYNTHESIS GLOBO SERIES BETA ALANINE METABOLISM MATURITY ONSET DIABETES OF THE YOUNG TYPE II DIABETES MELLITUS
ALDOSTERONE REGULATED SODIUM REABSORPTION
GLUTATHIONE METABOLISM
ARACHIDONIC ACID METABOLISM GLYCOSAMINOGLYCAN BIOSYNTHESIS HEPARAN SULFATE LIMONENE AND PINENE DEGRADATION FATTY ACID METABOLISM TERPENOID BACKBONE BIOSYNTHESIS BIOSYNTHESIS OF UNSATURATED FATTY ACIDS SPLICEOSOME LEISHMANIA INFECTION CITRATE CYCLE TCA CYCLE PATHOGENIC ESCHERICHIA COLI INFECTION MISMATCH REPAIR ONE CARBON POOL BY FOLATE VIBRIO CHOLERAE INFECTION OTHER GLYCAN DEGRADATION **RIBOSOME** SPHINGOLIPID METABOLISM PRION DISEASES PRIMARY BILE ACID BIOSYNTHESIS 怇 SULFUR METABOLISM RIBOFLAVIN METABOLISM PHOSPHATIDYLINOSITOL SIGNALING SYSTEM MELANOGENESIS GNRH SIGNALING PATHWAY GLYCOSPHINGOLIPID BIOSYNTHESIS GANGLIO SERIES INOSITOL PHOSPHATE METABOLISM BASE EXCISION REPAIR PROXIMAL TUBULE BICARBONATE RECLAMATION DNA REPLICATION NUCLEOTIDE EXCISION REPAIR VALINE LEUCINE AND ISOLEUCINE DEGRADATION **PROTEASOME** BASAL CELL CARCINOMA TRYPTOPHAN METABOLISM NICOTINATE AND NICOTINAMIDE METABOLISM **OLFACTORY TRANSDUCTION** PROPANOATE METABOLISM BUTANOATE METABOLISM O GLYCAN BIOSYNTHESIS PHENYLALANINE METABOLISM RENIN ANGIOTENSIN SYSTEM INTESTINAL IMMUNE NETWORK FOR IGA PRODUCTION ABC TRANSPORTERS PORPHYRIN AND CHLOROPHYLL METABOLISM ARGININE AND PROLINE METABOLISM HEDGEHOG SIGNALING PATHWAY GLYOXYLATE AND DICARBOXYLATE METABOLISM CARDIAC MUSCLE CONTRACTION ALANINE ASPARTATE AND GLUTAMATE METABOLISM EPITHELIAL CELL SIGNALING IN HELICOBACTER PYLORI INFECTION STEROID BIOSYNTHESIS CYSTEINE AND METHIONINE METABOLISM PYRUVATE METABOLISM UBIQUITIN MEDIATED PROTEOLYSIS NEUROTROPHIN SIGNALING PATHWAY WNT SIGNALING PATHWAY DILATED CARDIOMYOPATHY NOD LIKE RECEPTOR SIGNALING PATHWAY NOTCH SIGNALING PATHWAY CHRONIC MYELOID LEUKEMIA
TGF BETA SIGNALING PATHWAY
COLORECTAL CANCER
T CELL RECEPTOR SIGNALING PATHWAY **VEGF SIGNALING PATHWAY** FC EPSILON RI SIGNALING PATHWAY GLYCINE SERINE AND THREONINE METABOLISM PEROXISOME CYTOKINE CYTOKINE RECEPTOR INTERACTION GLYCOLYSIS GLUCONEOGENESIS GLYCEROPHOSPHOLIPID METABOLISM **GLYCEROLIPID METABOLISM** JAK STAT SIGNALING PATHWAY **HUNTINGTONS DISEASE** HEMATOPOIETIC CELL LINEAGE ETHER LIPID METABOLISM
AMINO SUGAR AND NUCLEOTIDE SUGAR METABOLISM
LONG TERM POTENTIATION FC GAMMA R MEDIATED PHAGOCYTOSIS VASCULAR SMOOTH MUSCLE CONTRACTION **GAP JUNCTION** CALCIUM SIGNALING PATHWAY CELL CYCLE PROSTATE CANCER RENAL CELL CARCINOMA PROGESTERONE MEDIATED OOCYTE MATURATION **ERBB SIGNALING PATHWAY** MTOR SIGNALING PATHWAY CHEMOKINE SIGNALING PATHWAY **ENDOCYTOSIS** ADHERENS JUNCTION OOCYTE MEIOSIS GALACTOSE METABOLISM ACUTE MYELOID LEUKEMIA **GLIOMA** PANCREATIC CANCER **FOCAL ADHESION** PATHWAYS IN CANCER RIG I LIKE RECEPTOR SIGNALING PATHWAY **ENDOMETRIAL CANCER** MAPK SIGNALING PATHWAY PURINE METABOLISM TOLL LIKE RECEPTOR SIGNALING PATHWAY REGULATION OF ACTIN CYTOSKELETON BASAL TRANSCRIPTION FACTORS LONG TERM DEPRESSION ALPHA LINOLENIC ACID METABOLISM **TIGHT JUNCTION** PENTOSE AND GLUCURONATE INTERCONVERSIONS SNARE INTERACTIONS IN VESICULAR TRANSPORT CELL ADHESION MOLECULES CAMS HYPERTROPHIC CARDIOMYOPATHY HCM ARRHYTHMOGENIC RIGHT VENTRICULAR CARDIOMYOPATHY ARVC ECM RECEPTOR INTERACTION AMINOACYL TRNA BIOSYNTHESIS VALINE LEUCINE AND ISOLEUCINE BIOSYNTHESIS AMYOTROPHIC LATERAL SCLEROSIS ALS N GLYCAN BIOSYNTHESIS LYSOSOME 4POPTOSIS PYRIMIDINE METABOLISM VASOPRESSIN REGULATED WATER REABSORPTION PENTOSE PHOSPHATE PATHWAY **BLADDER CANCER** LEUKOCYTE TRANSENDOTHELIAL MIGRATION P53 SIGNALING PATHWAY HOMOLOGOUS RECOMBINATION PROTEIN EXPORT
GLYCOSYLPHOSPHATIDYLINOSITOL GPI ANCHOR BIOSYNTHESIS
B CELL RECEPTOR SIGNALING PATHWAY
STARCH AND SUCROSE METABOLISM CYTOSOLIC DNA SENSING PATHWAY DORSO VENTRAL AXIS FORMATION RNA POLYMERASE **MELANOMA** ALZHEIMERS DISEASE INSULIN SIGNALING PATHWAY NEUROACTIVE LIGAND RECEPTOR INTERACTION ADIPOCYTOKINE SIGNALING PATHWAY PPAR SIGNALING PATHWAY SMALL CELL LUNG CANCER PARKINSONS DISEASE OXIDATIVE PHOSPHORYLATION LYSINE DEGRADATION ANTIGEN PROCESSING AND PRESENTATION RNA DEGRADATION NON SMALL CELL LUNG CANCER THYROID CANCER DRUG METABOLISM CYTOCHROME P450

SYSTEMIC LUPUS ERYTHEMATOSUS

COMPLEMENT AND COAGULATION CASCADES

Mean GSVA score

Treatment