Canonical Pathways	CT-2A Vehicle Vs. D2C7-Day 9 - 2021-08-27 01:54 PM	CT-2A Vehicle Vs. CD40 Day 9-P 0.05 - 2021-08-27 01:49 PM	CT-2A-Vehicle Vs. D2C7+CD40 Day 9 P 0.05 - 2021-08-27 01:58 PM
PPAR Signaling	-4.642	0	-0.447
PPARα/RXRα Activation	-2.683	-0.816	1.414
Phagosome Formation	5.883	3	-1.622
Breast Cancer Regulation by Stathmin1	3.796	2.132	-2.121
Tumor Microenvironment Pathway	5.091	0.577	-0.426
Cardiac Hypertrophy Signaling (Enhanced)	4.696	0	-0.816
IL-6 Signaling	4.644	-0.447	-0.333
Colorectal Cancer Metastasis Signaling	4.036	-0.333	-0.471
Role of Hypercytokinemia/hyperchemokinemia in the Pathogenesis of Influenza	5.831	0	3.606
Interferon Signaling	2.84	0	2.828
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	3.413	0	2.236
Role of PKR in Interferon Induction and Antiviral Response	3.683	0	2.333
Xenobiotic Metabolism AHR Signaling Pathway	2.5	1.633	1.342
IL-15 Production	3.286	1.89	2.333
Necroptosis Signaling Pathway	3.307	2.449	2.333
Crosstalk between Dendritic Cells and Natural Killer Cells	4.583	2.646	2.828
Systemic Lupus Erythematosus In B Cell Signaling Pathway	6.194	2.121	2.4
TREM1 Signaling	4.707	0	1.633
Neuroinflammation Signaling Pathway	5.821	0.816	1.886
Production of Nitric Oxide and Reactive Oxygen Species in Macrophages	4.16	1.667	1.732
IL-17 Signaling	4.522	1.414	1
Acute Phase Response Signaling	5.286	1.633	1.155
Erythropoietin Signaling Pathway	-1.234	-1.89	-2.668
Superpathway of Cholesterol Biosynthesis	-0.816	-2.111	-2
Glioblastoma Multiforme Signaling	0.577	-1.633	-1.89
MSP-RON Signaling In Macrophages Pathway	-0.18	-1	-2.121
LXR/RXR Activation	-2.959	-1.134	-0.905
Amyotrophic Lateral Sclerosis Signaling	-1.291	-1	-1
Huntington's Disease Signaling	-1.698	0	-1.89
Apelin Cardiac Fibroblast Signaling Pathway	-2	0	-1.134
Antioxidant Action of Vitamin C	-1.789	0	-1
eNOS Signaling	0.775	1.414	1.941
Apoptosis Signaling	-0.6	2	1.89
Opioid Signaling Pathway	1.414	-1.633	-0.905
Role of NFAT in Cardiac Hypertrophy	1.043	-2.236	-1
P2Y Purigenic Receptor Signaling Pathway	2.353	-2	-0.816
ERK/MAPK Signaling	2.535	-1.134	-0.378
Cardiac Hypertrophy Signaling	2.263	-1.414	-1.265
cAMP-mediated signaling	1.877	-1.342	-1.604
Estrogen Receptor Signaling	2.335	-0.905	-1.291
Senescence Pathway	2.654	-1	-1
ILK Signaling	3.162	-0.707	-2.333
Gα12/13 Signaling	2.357	-1.342	-2.236
CXCR4 Signaling	2.268	-1	-2.828
Integrin Signaling	2.694	0.378	-2.121
CREB Signaling in Neurons	3.442	0.408	-1.029
Hepatic Fibrosis Signaling Pathway	3.487	0.302	-0.962
Ephrin Receptor Signaling	3.053	0	-1.89
NF-κB Activation by Viruses	2.683	0	-1.342
MSP-RON Signaling In Cancer Cells Pathway	3.138	0	-1.414
ERK5 Signaling	3.153	0	-1.342
LPS/IL-1 Mediated Inhibition of RXR Function	2.837	0	1
Retinoic acid Mediated Apoptosis Signaling	2.673	0	1.342
Th1 Pathway	3.674	0	1.508
p38 MAPK Signaling	3.536	0.447	0.707
HMGB1 Signaling	3.683	0	0.832
TNFR1 Signaling	3.545	0	1
Regulation Of The Epithelial Mesenchymal Transition By Growth Factors Pathway	3.452	1	-0.302
Natural Killer Cell Signaling	3.781	1	0
HIF1α Signaling	3.015	1	0.229
Osteoarthritis Pathway	2.714	1.134	0.333
Death Receptor Signaling	2.611	1	0.333
PI3K Signaling in B Lymphocytes	3.43	-0.447	0
IL-8 Signaling	3.812	0.378	0
Toll-like Receptor Signaling	3.578	0	0
IL-1 Signaling	3.771	0	0
iNOS Signaling	3.9	0	0
Autophagy	2.611	0	0.707
Th2 Pathway	2.524	0	0.447
Gαs Signaling	2.887	0	0.447
FAT10 Cancer Signaling Pathway	2.887	0	0.447
Leukocyte Extravasation Signaling	3	0.378	-0.333
PI3K/AKT Signaling	2.683	0	-0.447
HER-2 Signaling in Breast Cancer	3.042	0	-0.333
Role of RIG1-like Receptors in Antiviral Innate Immunity	3.051	0	0
Oncostatin M Signaling	3.207	0	0
Inflammasome pathway	3.162	0	0
PDGF Signaling	2.828	0	0
Estrogen-Dependent Breast Cancer Signaling	2.84	0	0
Role of IL-17F in Allergic Inflammatory Airway Diseases	2.714	0	0
B Cell Activating Factor Signaling	2.714	0	0
TNFR2 Signaling	2.668	0	0
Chemokine Signaling	2.673	0	0
Corticotropin Releasing Hormone Signaling	1.213	0.447	1.342
Adrenomedullin signaling pathway	1.183	0.905	0.832
Activation of IRF by Cytosolic Pattern Recognition Receptors	2.041	0	1.667
Ferroptosis Signaling Pathway	1.671	-0.447	0.707
IL-23 Signaling Pathway	1.732	0	1
Type II Diabetes Mellitus Signaling	1.964	0	1
Induction of Apoptosis by HIV1	1.877	0	0.816

GNRH Signaling	2.335	0	-1
Cholecystokinin/Gastrin-mediated Signaling	2.6	0	-0.816
Telomerase Signaling	2.111	0	-1
HGF Signaling	2.041	0	-1
Neuregulin Signaling	1.886	0	-1
GM-CSF Signaling	1.897	0	-1
BMP signaling pathway	1.667	0	-1.342
IL-3 Signaling	1.698	0	-1
Agrin Interactions at Neuromuscular Junction	1.604	0	-1
NRF2-mediated Oxidative Stress Response	1.414	0	-1
TGF-β Signaling	1.508	0	-0.816
Ceramide Signaling	2.236	0	-0.447
FLT3 Signaling in Hematopoietic Progenitor Cells	1.807	0	-0.447
Aryl Hydrocarbon Receptor Signaling	2.065	0	0.378
Glioma Invasiveness Signaling	2.065	0	0
4-1BB Signaling in T Lymphocytes	2.111	0	0
JAK/STAT Signaling	2.132	0	0
FGF Signaling	2.138	0	0
Endoplasmic Reticulum Stress Pathway	2.236	0	0
ERB2-ERBB3 Signaling	2.309	0	0
RANK Signaling in Osteoclasts	2.357	0	0
Actin Nucleation by ARP-WASP Complex	2.496	0	0
RAC Signaling	2.524	0	0
NGF Signaling	2.449	0	0
Differential Regulation of Cytokine Production in Macrophages and T Helper Cells by IL-17A and IL-17F	2.449	0	0
Differential Regulation of Cytokine Production in Intestinal Epithelial Cells by IL-17A and IL-17F	2.449	0	0
CD40 Signaling	1.528	0	0.447
WNT/Ca+ pathway	1.5	0	0
Role of NANOG in Mammalian Embryonic Stem Cell Pluripotency	1.508	0	0
HIPPO signaling	1.667	0	0
Prolactin Signaling	1.606	0	0
IL-7 Signaling Pathway	1.604	0	0
Bladder Cancer Signaling	1.633	0	0
Tumoricidal Function of Hepatic Natural Killer Cells	1.633	0	0
Gαq Signaling	1.8	0	0
April Mediated Signaling	1.807	0	0
CD27 Signaling in Lymphocytes	1.807	0	0
Thrombopoietin Signaling	1.807	0	0
IL-9 Signaling	1.732	0	0
Neurotrophin/TRK Signaling	1.732	0	0
Lymphotoxin β Receptor Signaling	1.732	0	0
MIF-mediated Glucocorticoid Regulation	1.732	0	0
Renin-Angiotensin Signaling	1.964	0	0
LPS-stimulated MAPK Signaling	1.964	0	0
MIF Regulation of Innate Immunity	2	0	0
Role of IL-17A in Psoriasis	2	0	0
Renal Cell Carcinoma Signaling	1.897	0	0
IL-2 Signaling	1.897	0	0
ERBB Signaling	1.886	0	0
Fcγ Receptor-mediated Phagocytosis in Macrophages and Monocytes	1.877	0	0
GP6 Signaling Pathway	1	2	-0.707
Xenobiotic Metabolism PXR Signaling Pathway	1	0.905	-1.667
Signaling by Rho Family GTPases	1.915	1.342	-1.342
Gαi Signaling	1.414	0	-3.051
Paxillin Signaling	1.155	0	-2
mTOR Signaling	1.46	0.378	-2
Actin Cytoskeleton Signaling	1.633	-0.378	-2.449
Endocannabinoid Developing Neuron Pathway	1.698	0	-2.236
fMLP Signaling in Neutrophils	1.528	0	-2
Regulation of Actin-based Motility by Rho	1.941	0	-2
Unfolded protein response	1.941	0	-2.236
Synaptogenesis Signaling Pathway	-0.316	0	-0.832
Apelin Liver Signaling Pathway	-0.447	0	-1.414
Role of MAPK Signaling in Promoting the Pathogenesis of Influenza	-0.728	0	-1.633
Insulin Receptor Signaling	0	0.816	-2.449
Retinoate Biosynthesis I	0	0	-2
Sphingosine-1-phosphate Signaling	0	0	-2.236
Antiproliferative Role of Somatostatin Receptor 2	0.707	0	-2
Xenobiotic Metabolism General Signaling Pathway	0.655	0	-2
Regulation Of The Epithelial Mesenchymal Transition In Development Pathway	0.277	0	-2
Fc Epsilon RI Signaling	0.471	0	-2
G Beta Gamma Signaling	0.447	0	-2
Thrombin Signaling	1.134	-0.447	-1.633
HOTAIR Regulatory Pathway	1.826	-0.447	-1.508
14-3-3-mediated Signaling	1.147	-1	-1
GDNF Family Ligand-Receptor Interactions	1.291	-1	-1.342
VEGF Signaling	0.577	-0.447	-1
VEGF Family Ligand-Receptor Interactions	0.258	0	-0.707
Coagulation System	0.302	0	-1
3-phosphoinositide Biosynthesis	0.688	0	-1
Acute Myeloid Leukemia Signaling	0.5	0	-1
Ovarian Cancer Signaling	0.535	0	-1.134
Mouse Embryonic Stem Cell Pluripotency	0.775	0	-1.633
SPINK1 General Cancer Pathway	0.905	0	-1.342
Intrinsic Prothrombin Activation Pathway	1	0	-1.342
PAK Signaling	1.069	0	-1
D-myo-inositol-5-phosphate Metabolism	1.091	0	-1
BEX2 Signaling Pathway	1	0	-1
3-phosphoinositide Degradation	0.894	0	-1
TWEAK Signaling	0.943	0	-1
D-myo-inositol (1,4,5,6)-Tetrakisphosphate Biosynthesis	0.943	0	-1
D-myo-inositol (3,4,5,6)-tetrakisphosphate Biosynthesis	0.943	0	-1
Insulin Secretion Signaling Pathway	1.859	-1.134	0.447

Cardiac β-adrenergic Signaling	0.905	-1.342	0.816
White Adipose Tissue Browning Pathway	0.832	-1.134	0.816
RHOGDI Signaling	-1.342	-1.633	0
Dopamine-DARPP32 Feedback in cAMP Signaling	-0.655	-1.134	0.816
Superpathway of Geranylgeranyldiphosphate Biosynthesis I (via Mevalonate)	-0.447	-1.414	0
Endocannabinoid Neuronal Synapse Pathway	-0.5	-1	0
Mevalonate Pathway I	-0.447	-0.816	0
Synaptic Long Term Potentiation	0.218	-1.633	-0.816
UVA-Induced MAPK Signaling	0.302	-2	0
Cholesterol Biosynthesis I	0	-2	0
Cholesterol Biosynthesis III (via Desmosterol)	0	-2	0
Cholesterol Biosynthesis II (via 24,25-dihydrolanosterol)	0	-2	0
Coronavirus Replication Pathway	0	-2	0
Nitric Oxide Signaling in the Cardiovascular System	-1.667	0.447	1.134
PD-1, PD-L1 cancer immunotherapy pathway	-0.775	0	0.816
WNT/β-catenin Signaling	-0.447	-0.447	0.832
Inhibition of Matrix Metalloproteases	-1.508	0	0
Basal Cell Carcinoma Signaling	-1.633	0	0
Apelin Pancreas Signaling Pathway	-1.633	0	0
Sperm Motility	-0.5	-0.378	0
UVB-Induced MAPK Signaling	-0.707	0	0
BAG2 Signaling Pathway	-1.069	0	0
Apelin Adipocyte Signaling Pathway	-0.905	0	0
AMPK Signaling	0.832	1.414	0
Dopamine Degradation	0	1	0
Sumoylation Pathway	0	1	0
Role of MAPK Signaling in Inhibiting the Pathogenesis of Influenza	1.147	0	0.816
Complement System	0.707	-0.447	0.707
CDK5 Signaling	0.832	-0.447	0.378
Protein Kinase A Signaling	0.905	-0.632	0.535
GPCR-Mediated Integration of Enteroendocrine Signaling Exemplified by an L Cell	0.378	-0.447	0
Semaphorin Neuronal Repulsive Signaling Pathway	0.655	-0.378	0
Calcium Signaling	0.905	-1	-0.378
Ephrin B Signaling	0.577	-1	0
Endocannabinoid Cancer Inhibition Pathway	0.577	-0.816	0
PEDF Signaling	0.728	0.447	-0.447
Angiopoietin Signaling	1.213	0.447	-0.707
Endothelin-1 Signaling	1.029	0.707	0.302
Superpathway of Inositol Phosphate Compounds	1.4	0.447	0
STAT3 Pathway	1.342	0.447	0.333
p70S6K Signaling	1.414	-0.447	0
Pancreatic Adenocarcinoma Signaling	1.147	0	-0.447
Apelin Endothelial Signaling Pathway	1.4	0	-0.333
Relaxin Signaling	1.147	0	0
Tryptophan Degradation III (Eukaryotic)	1.342	0	0
Small Cell Lung Cancer Signaling	1.265	0	0
Macropinocytosis Signaling	1.265	0	0
NAD Signaling Pathway	0.816	0.378	0
α-Adrenergic Signaling	0.577	0	0
CNTF Signaling	0.632	0	0
UVC-Induced MAPK Signaling	0.632	0	0
Role of JAK1, JAK2 and TYK2 in Interferon Signaling	1	0	0
IL-17A Signaling in Airway Cells	1	0	0
Androgen Signaling	0.905	0	0
ERBB4 Signaling	0.905	0	0
p53 Signaling	0.832	0	0
Regulation of Cellular Mechanics by Calpain Protease	0.816	0	0
Eicosanoid Signaling	0.816	0	0
IL-17A Signaling in Gastric Cells	0.816	0	0
Coronavirus Pathogenesis Pathway	0.59	0	0.447
Neuroprotective Role of THOP1 in Alzheimer's Disease	0.302	0	0.816
PTEN Signaling	0.243	0	0.447
Inhibition of Angiogenesis by TSP1	0	0	0.447
Synaptic Long Term Depression	-0.2	0.333	0
Phospholipases	0	0.447	0
Sirtuin Signaling Pathway	0	0.378	0
IL-22 Signaling	0.378	0	0
Role of PI3K/AKT Signaling in the Pathogenesis of Influenza	0.302	0	0
IGF-1 Signaling	0.277	0	0
ATM Signaling	0.258	0	0
MYC Mediated Apoptosis Signaling	0.258	0	0
CCR3 Signaling in Eosinophils	0.258	0	0
PCP (Planar Cell Polarity) Pathway	-0.277	0	0
GADD45 Signaling	0	0	0
Salvage Pathways of Pyrimidine Deoxyribonucleotides	0	0	0
Role of Cytokines in Mediating Communication between Immune Cells	0	0	0
Xenobiotic Metabolism Signaling	0	0	0
Semaphorin Signaling in Neurons	0	0	0
G Protein Signaling Mediated by Tubby	0	0	0
Ketogenesis	0	0	0
Axonal Guidance Signaling	0	0	0
Sertoli Cell-Sertoli Cell Junction Signaling	0	0	0
Ceramide Degradation	0	0	0
IL-17A Signaling in Fibroblasts	0	0	0
GABA Receptor Signaling	0	0	0
β-alanine Degradation I	0	0	0
Pathogenesis of Multiple Sclerosis	0	0	0
G-Protein Coupled Receptor Signaling	0	0	0
Polyamine Regulation in Colon Cancer	0	0	0
Sphingosine and Sphingosine-1-phosphate Metabolism	0	0	0
Caveolar-mediated Endocytosis Signaling	0	0	0
IL-12 Signaling and Production in Macrophages	0	0	0
Role of JAK1 and JAK3 in γc Cytokine Signaling	0	0	0

Hepatic Fibrosis / Hepatic Stellate Cell Activation	0	0	0
Gap Junction Signaling	0	0	0
Germ Cell-Sertoli Cell Junction Signaling	0	0	0
MSP-RON Signaling Pathway	0	0	0
Methylglyoxal Degradation I	0	0	0
Human Embryonic Stem Cell Pluripotency	0	0	0
FAT10 Signaling Pathway	0	0	0
Tryptophan Degradation to 2-amino-3-carboxymuconate Semialdehyde	0	0	0
Protein Ubiquitination Pathway	0	0	0
Parkinson's Signaling	0	0	0
Phenylalanine Degradation IV (Mammalian, via Side Chain)	0	0	0
Zymosterol Biosynthesis	0	0	0
FAK Signaling	0	0	0
Clathrin-mediated Endocytosis Signaling	0	0	0
Atherosclerosis Signaling	0	0	0
Circadian Rhythm Signaling	0	0	0
TR/RXR Activation	0	0	0
Phagosome Maturation	0	0	0
Ketolysis	0	0	0
Role of MAPK Signaling in the Pathogenesis of Influenza	0	0	0
GDP-L-fucose Biosynthesis I (from GDP-D-mannose)	0	0	0
Agranulocyte Adhesion and Diapedesis	0	0	0
Airway Pathology in Chronic Obstructive Pulmonary Disease	0	0	0
Inositol Pyrophosphates Biosynthesis	0	0	0
Palmitate Biosynthesis I (Animals)	0	0	0
Alanine Degradation III	0	0	0
Oxidative Ethanol Degradation III	0	0	0
IL-4 Signaling	0	0	0
Growth Hormone Signaling	0	0	0
Hepatic Cholestasis	0	0	0
Citrulline-Nitric Oxide Cycle	0	0	0
Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	0	0	0
Fatty Acid Biosynthesis Initiation II	0	0	0
Oleate Biosynthesis II (Animals)	0	0	0
Role of Tissue Factor in Cancer	0	0	0
Cancer Drug Resistance By Drug Efflux	0	0	0
RAR Activation	0	0	0
IL-10 Signaling	0	0	0
Th1 and Th2 Activation Pathway	0	0	0
VDR/RXR Activation	0	0	0
Iron homeostasis signaling pathway	0	0	0
Cellular Effects of Sildenafil (Viagra)	0	0	0
Tryptophan Degradation X (Mammalian, via Tryptamine)	0	0	0
Role of JAK2 in Hormone-like Cytokine Signaling	0	0	0
Alanine Biosynthesis II	0	0	0
Apelin Muscle Signaling Pathway	0	0	0
Adipogenesis pathway	0	0	0
Primary Immunodeficiency Signaling	0	0	0
Regulation of the Epithelial-Mesenchymal Transition Pathway	0	0	0
Chronic Myeloid Leukemia Signaling	0	0	0
Granulocyte Adhesion and Diapedesis	0	0	0
Putrescine Degradation III	0	0	0
Prostate Cancer Signaling	0	0	0
Cysteine Biosynthesis/Homocysteine Degradation	0	0	0
PXR/RXR Activation	0	0	0
Glucocorticoid Receptor Signaling	0	0	0
Role of IL-17A in Arthritis	0	0	0
Extrinsic Prothrombin Activation Pathway	0	0	0
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	0	0	0
Tight Junction Signaling	0	0	0
Molecular Mechanisms of Cancer	0	0	0
Virus Entry via Endocytic Pathways	0	0	0
Spermidine Biosynthesis I	0	0	0
Noradrenaline and Adrenaline Degradation	0	0	0
Antigen Presentation Pathway	0	0	0
FXR/RXR Activation	0	0	0
Remodeling of Epithelial Adherens Junctions	0	0	0
Superpathway of Citrulline Metabolism	0	0	0
Role of JAK family kinases in IL-6-type Cytokine Signaling	0	0	0

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p38 MAPK Signaling	3.536	0.447	0.707
TNFR1 Signaling	3.545	0	1

"N/A" values were changed to 0. The z scores of each row were summed, then the summed values were ranked from highest to lowest. A heatmap of the rows containing the top 20 summed values was created using GraphPad Prisim version 9.

Genes in the Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses network	CT-2A Vehicle Vs. D2C7-Day 9 - 2021-08-27 01:54 PM	CT-2A Vehicle Vs. CD40 Day 9- P 0.05 - 2021-08-27 01:49 PM	CT-2A-Vehicle Vs. D2C7+CD40 Day 9 P 0.05 - 2021-08-27 01:58 PM
IL12B	5.002820353	3.021690216	4.584145266
PTX3	6.195421942	1.107430886	3.980370783
IL6	6.71796393	0	4.413824946
TNF	4.602636284	0.271717237	3.297161077
IL21	4.6945071	0	3.202278086
TNFSF8	3.80930142	1.620447407	2.02134116
C3	3.204103744	2.251852198	1.863066623
LIF	4.714748722	0.528288952	1.658023977
IL1A	3.348667085	0.123899367	2.329987101
CLEC6A	2.733697532	1.368532122	1.02525123
IL1B	3.296967183	0.080773387	1.720694491
IFNB1	5.03396532	0	0
OSM	2.550098221	0.513723851	1.702504764
FASLG	1.097755994	1.749168762	1.275375575
TLR2	2.306625414	0.344836139	1.230946844
NFKB2	2.400703641	0.461591082	0.997491011
NLRP3	2.260222485	0.331281877	1.173990433
CCL5	1.173644228	1.593852882	0.989870727
OAS1	1.626564919	0.915557739	1.145489335
C5AR1	1.931984843	0.752232095	0.561248025
Oas1b	1.521367541	0.308651884	1.289512842
OAS3	1.60659606	0.831046388	0.644009808
RELB	1.777794597	0.349570344	0.938069664
IRF7	1.102503345	0.864761638	1.072857919
DDX58	1.64404709	0.433505524	0.902790933
IFIH1	1.400026042	0.598095487	0.918272228
C5	1.033114845	0.67508842	1.206004095
NOD2	1.420424445	0.533973817	0.802489779
CLEC7A	0.941809571	1.216956991	0.523390168
IL17C	2.636835089	0	0
TNFSF10	0.202328258	1.112668448	1.276070686
EIF2AK2	1.393734243	0.379040425	0.76999333
LTB	1.082493272	0.867859773	0.576478669
CD70	2.515987721	0	0
TNFSF14	2.487760699	0	0
RIPK2	1.444438802	0.289906544	0.744498476
OAS2	1.332132245	0.460415323	0.623204789
PRKCD	0.544150364	0.899450731	0.767713356
SYK	1.314122388	0.49931998	0.3892798
TLR5	1.388951361	0.260966419	0.451439079
NOD1	0.491350485	0.784660308	0.817540155
TLR6	1.124463478	0.551124512	0.340554027
TNFSF15	2.010233176	0	0
Tnfsf9	1.45087511	0.125107426	0.383025231
MYD88	1.175582163	0.286882795	0.346188403
PLCG2	1.041064449	0.261819131	0.428317482
TLR3	0.700056687	0.46784743	0.508597869
TLR8	1.419955985	0.893038181	-0.647730839
NFKB1	1.172426493	0.132291119	0.301820118
CLCF1	1.519984055	0.184534724	-0.249433083
IL33	1.035021622	0.227411028	0.185614165
TLR9	0.736171895	0.341744793	0.359259488
CNTF	0.902034995	0.453100505	-0.086919457
C1QA	0.508640669	0.5362456	0.215848158

TLR4	0.949339393	0.371076826	-0.109606529
TGFB2	0.283525931	0.369567929	0.553831394
REL	0.841948717	0.096740388	0.15142473
RELA	0.895714857	-0.050925784	0.215241288
TGFB1	0.597592849	0.300328432	0.161665162
C1QB	0.432479503	0.433760886	0.171511661
Oas1d (includes others)	0.401912351	0.112252819	0.46091027
PRKCQ	0.060656848	0.398433692	0.51150532
C1QC	0.368155441	0.415194047	0.162098515
NLRC4	0.678516297	0.415367311	-0.157864629
TNFSF13B	0.249162196	0.127901203	0.517144949
TLR1	0.837540093	-0.024373405	0.075136065
PIK3R5	0.80804434	0.049742929	-0.021408408
TLR7	0.527818538	0.425761826	-0.151734094
IL15	0.155132699	0.45654949	0.136773606
IL11	1.168960036	-0.402164107	-0.022354182
C3AR1	1.159475399	0.127672668	-0.571530936
CASP1	-0.002728729	0.391956318	0.216785891
PIK3C2A	0.17113773	0.143392968	0.081277808
TRAF6	0.16993084	0.160588867	0.038852388
EIF2S1	0.314848343	-0.013269146	0.003998079
PIK3CD	0.08560683	0.106588745	0.032335059
PIK3R4	0.082123714	0.014628676	0.112869671
RNASEL	-0.071329452	0.134968701	0.113895585
PIK3CB	0.005707305	0.050044343	0.094772401
PIK3R1	0.090616473	0.105404408	-0.059268406
MAVS	0.189311199	0.012418715	-0.079874814
PRKD3	0.120974384	0.061503214	-0.066197824
IL4	-0.144479968	0.089949863	0.131056768
PRKCI	0.067616121	-0.043696346	0.008431759
PRKD1	0.308641783	-0.102014985	-0.235282105
MAP2K4	-0.108832438	-0.026168041	0.089245448
MAPK9	-0.11835926	0.026761696	0.030545302
TNFSF13	-0.279388639	0.457063578	-0.246936614
PIK3C3	-0.083909157	-0.013351894	-0.003418973
CREB1	0.021128267	0.016780122	-0.14597227
IL18	-0.274179793	0.072281319	0.065360837
PIK3R3	-0.069674449	-0.069099987	-0.021780875
MAPK3	-0.311851133	0.041258372	0.086017214
MAPK1	-0.093955885	-0.071214986	-0.026485476
IRF3	-0.043232316	-0.033148286	-0.130616559
PRKCH	0.409583859	-0.195204268	-0.430119543
PIK3CA	-0.107587709	-0.032997404	-0.119026673
TNFSF12	-0.070596002	-0.005293	-0.207809369
PRKCA	-0.217502124	0.02408972	-0.094750016
MAPK10	-0.288189516	-0.052130967	0.006132742
PIK3R6	-0.104992839	-0.123508662	-0.118783111
PIK3CG	0.110919912	-0.006315033	-0.463503018
MAPK8	-0.16706155	-0.148369929	-0.086953859
PIK3C2B	0.014816371	-0.101435879	-0.430512885
TICAM1	-0.10729324	-0.12272447	-0.331466205
PRKCE	-0.284472768	-0.19294311	-0.085376909
IL12A	-0.615332549	0.176413917	-0.277577946
PRKCG	-0.65554932	-0.236090578	0.074696828
IL17D	-0.439851524	-0.275073667	-0.227903223
PRKCB	-0.293272205	-0.249824306	-0.403979835
PIK3R2	-0.460981554	-0.261345627	-0.239857179
Eda	-0.536937372	-0.321476618	-0.118547984

PRKCZ	-0.408812256	-0.244202675	-0.373630935
TGFB3	-0.310914911	-0.265450547	-0.480871327
MAPK12	-0.42165881	-0.322033441	-0.318810282

	CT-2A Vehicle Vs. D2C7	CT-2A Vehicle Vs. CD40	CT-2A-Vehicle Vs. D2C7+CD40
IL12B	5.002820353	3.021690216	4.584145266
PTX3	6.195421942	1.107430886	3.980370783
IL6	6.71796393	0	4.413824946
TNF	4.602636284	0.271717237	3.297161077
IL21	4.6945071	0	3.202278086
TNFSF8	3.80930142	1.620447407	2.02134116
C3	3.204103744	2.251852198	1.863066623
LIF	4.714748722	0.528288952	1.658023977
IL1A	3.348667085	0.123899367	2.329987101
CLEC6A	2.733697532	1.368532122	1.02525123
IL1B	3.296967183	0.080773387	1.720694491
IFNB1	5.03396532	0	0
OSM	2.550098221	0.513723851	1.702504764
FASLG	1.097755994	1.749168762	1.275375575
TLR2	2.306625414	0.344836139	1.230946844
NFKB2	2.400703641	0.461591082	0.997491011
NLRP3	2.260222485	0.331281877	1.173990433
CCL5	1.173644228	1.593852882	0.989870727
OAS1	1.626564919	0.915557739	1.145489335
C5AR1	1.931984843	0.752232095	0.561248025

“N/A” values were changed to 0. The z scores of each row were summed, then the summed values were ranked from highest to lowest. A heatmap of the rows containing the top 20 summed values was created using GraphPad Prisim version 9.

Canonical Pathways	10- breast cancer [mammary gland] NA 292	7- breast cancer [mammary gland] NA 336	4- breast cancer [mammary gland] NA 324	1- breast cancer [mammary gland] NA 291	CT-2A-Vehicle Vs. D2C7+CD40 Day 9 P 0.05 - 2021-08-27 01:58 PM	CT-2A Vehicle Vs. D2C7-Day 9 - 2021-08-27 01:54 PM	CT-2A Vehicle Vs. CD40 Day 9-P 0.05 - 2021-08-27 01:49 PM
CREB Signaling in Neurons	0.209	-2.828	-2.524	-3.162	-1.029	3.442	0.408
Phagosome Formation	0.378	-1.667	-1.886	-2.84	-1.622	5.883	3
Breast Cancer Regulation by Stathmin1	0.853	-2.191	-1.886	-2.138	-2.121	3.796	2.132
Th17 Activation Pathway	0	1.633	0.707	2.236	2	3.9	0
IL-23 Signaling Pathway	0	1	1	2	1	1.732	0
Crosstalk between Dendritic Cells and Natural Killer Cells	2.646	-0.816	0	0	2.828	4.583	2.646
Systemic Lupus Erythematosus In B Cell Signaling Pathway	1.732	0.775	-0.632	0	2.4	6.194	2.121
Neuroinflammation Signaling Pathway	1.604	0.277	-0.302	1.134	1.886	5.821	0.816
TREM1 Signaling	0	0	2	0	1.633	4.707	0
Role of Hypercytokinemia/hyperchemokinemia in the Pathogenesis of Influenza	0	0	0	0	3.606	5.831	0
Th1 Pathway	1	1.069	0	0	1.508	3.674	0
HMGB1 Signaling	2	2	0	0	0.832	3.683	0
T Cell Exhaustion Signaling Pathway	0.816	0.905	0.707	0	2.53	2.236	1
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	0	0	-1.342	0	2.236	3.413	0
Role of PKR in Interferon Induction and Antiviral Response	0	0	1	0	2.333	3.683	0
Interferon Signaling	0	0	0	0	2.828	2.84	0
Xenobiotic Metabolism AHR Signaling Pathway	0	0	-1.342	0	1.342	2.5	1.633
IL-17 Signaling	0	1.134	0	0	1	4.522	1.414
Acute Phase Response Signaling	0	0	0	0	1.155	5.286	1.633
IL-15 Production	0	-0.816	0	-1	2.333	3.286	1.89
Production of Nitric Oxide and Reactive Oxygen Species in Macrophages	1	0	0.707	0	1.732	4.16	1.667
Necroptosis Signaling Pathway	0.816	0	0	0	2.333	3.307	2.449
Dopamine-DARPP32 Feedback in cAMP Signaling	-2.236	-1.633	-0.707	0	0.816	-0.655	-1.134
Nitric Oxide Signaling in the Cardiovascular System	-2.449	-1.342	0	0	1.134	-1.667	0.447
PPAR Signaling	-1.342	0	-0.816	0	-0.447	-4.642	0
LXR/RXR Activation	0	0	-1.633	0	-0.905	-2.959	-1.134
PPARα/RXRα Activation	0.378	0	-1	0	1.414	-2.683	-0.816
IL-8 Signaling	1	0.447	-1.342	-2	0	3.812	0.378
Gα12/13 Signaling	0.707	2.236	0	0	-2.236	2.357	-1.342
Signaling by Rho Family GTPases	0.378	-0.447	1	-1.134	-1.342	1.915	1.342
IL-15 Signaling	0	0	1.342	0	-2	2.357	0
Integrin Signaling	-0.707	1	0.447	-0.447	-2.121	2.694	0.378
MSP-RON Signaling In Cancer Cells Pathway	2	0	1.414	-0.447	-1.414	3.138	0
Ephrin Receptor Signaling	1.342	0	1	0.378	-1.89	3.053	0
HOTAIR Regulatory Pathway	1.414	0	0.816	0	-1.508	1.826	-0.447
PI3K/AKT Signaling	1.342	0	1	0	-0.447	2.683	0
Senescence Pathway	1.155	0	1.134	0.816	-1	2.654	-1
Cardiac Hypertrophy Signaling (Enhanced)	0.655	-0.471	0.655	-1.387	-0.816	4.696	0
IL-6 Signaling	1.342	0.447	0.447	0	-0.333	4.644	-0.447
Colorectal Cancer Metastasis Signaling	2	0	1	-0.447	-0.471	4.036	-0.333
Tumor Microenvironment Pathway	0.632	0.302	1.414	0.816	-0.426	5.091	0.577
Natural Killer Cell Signaling	0	0.5	1.134	0	0	3.781	1
Hepatic Fibrosis Signaling Pathway	0.775	0.378	1.291	0.333	-0.962	3.487	0.302
Regulation Of The Epithelial Mesenchymal Transition By Growth Factors Pathway	1	0	0.707	0	-0.302	3.452	1
B Cell Receptor Signaling	0.816	0.632	0.447	0	-1	3.656	1
Apoptosis Signaling	0	0	0	0	1.89	-0.6	2
White Adipose Tissue Browning Pathway	0	-0.816	-2.646	0	0.816	0.832	-1.134
Insulin Secretion Signaling Pathway	0	-1.667	-0.775	0	0.447	1.859	-1.134
Opioid Signaling Pathway	0.378	-2.53	-1	0.447	-0.905	1.414	-1.633
Gustation Pathway	1	-2.887	-1.414	0	-0.816	1.807	-1
Role of NFAT in Cardiac Hypertrophy	-2	-1	-1.414	0	-1	1.043	-2.236
Estrogen Receptor Signaling	-1.265	-1.265	-1.604	-0.447	-1.291	2.335	-0.905
ILK Signaling	0.447	0	-0.816	-1.414	-2.333	3.162	-0.707
CXCR4 Signaling	0	0	-0.378	-1	-2.828	2.268	-1
Cardiac Hypertrophy Signaling	-0.447	-0.333	-0.378	0	-1.265	2.263	-1.414
P2Y Purigenic Receptor Signaling Pathway	0	0.378	-1.414	0	-0.816	2.353	-2
14-3-3-mediated Signaling	0	0	-1.342	0	-1	1.147	-1
cAMP-mediated signaling	0.378	0.302	-1.633	-0.816	-1.604	1.877	-1.342
Erythropoietin Signaling Pathway	-0.707	0.378	0.333	-0.816	-2.668	-1.234	-1.89
Superpathway of Cholesterol Biosynthesis	0	0	0	0	-2	-0.816	-2.111
Amyotrophic Lateral Sclerosis Signaling	0	0	0	0	-1	-1.291	-1
Apelin Cardiomyocyte Signaling Pathway	0	0	-0.378	0	-1	-0.832	-1
Huntington's Disease Signaling	-1.342	-0.447	0	0	-1.89	-1.698	0
Apelin Cardiac Fibroblast Signaling Pathway	0	0	0	0	-1.134	-2	0
Antioxidant Action of Vitamin C	-0.816	0	0	0	-1	-1.789	0
eNOS Signaling	-2.449	-0.816	-1.342	0	1.941	0.775	1.414
Protein Kinase A Signaling	-0.905	0.632	-0.832	-1	0.535	0.905	-0.632
Corticotropin Releasing Hormone Signaling	-2	0	0	-0.447	1.342	1.213	0.447
Adrenomedullin signaling pathway	-1.342	0.447	-1.265	-0.447	0.832	1.183	0.905
GP6 Signaling Pathway	-0.707	0	-1.342	0	-0.707	1	2
MSP-RON Signaling In Macrophages Pathway	0	-1.508	-0.816	-2	-2.121	-0.18	-1
Sirtuin Signaling Pathway	-0.447	0	-2.333	-1.667	0	0	0.378
Xenobiotic Metabolism PXR Signaling Pathway	0	-2.333	-0.816	-0.816	-1.667	1	0.905
GNRH Signaling	0	-1.134	-1.414	-2	-1	2.335	0
Xenobiotic Metabolism General Signaling Pathway	0.447	-0.447	-1.89	0	-2	0.655	0
G Beta Gamma Signaling	0	-1.134	-1	0	-2	0.447	0
Superpathway of Inositol Phosphate Compounds	0	-0.632	-1.897	-1	0	1.4	0.447
3-phosphoinositide Biosynthesis	0	-0.632	-1.633	-1	-1	0.688	0
D-myo-inositol (1,4,5,6)-Tetrakisphosphate Biosynthesis	0	-1	-1.342	-1	-1	0.943	0
D-myo-inositol (3,4,5,6)-tetrakisphosphate Biosynthesis	0	-1	-1.342	-1	-1	0.943	0
3-phosphoinositide Degradation	0	-1	-1.633	-1	-1	0.894	0
D-myo-inositol-5-phosphate Metabolism	0	-1	-1.667	-1	-1	1.091	0
Calcium Signaling	-2	-2.828	0	0	-0.378	0.905	-1
Endocannabinoid Neuronal Synapse Pathway	0	-1.633	0	0	0	-0.5	-1
GPCR-Mediated Nutrient Sensing in Enteroendocrine Cells	0	-2.121	-1.134	0	0	-0.775	-2
Synaptic Long Term Potentiation	0	-1.633	-0.816	0	-0.816	0.218	-1.633
Synaptic Long Term Depression	-1.633	-1.89	-0.378	-1	0	-0.2	0.333
Neuropathic Pain Signaling In Dorsal Horn Neurons	-1	-1.342	-1.134	0	0	-1.069	0
Sperm Motility	-1	-2.236	-0.447	0	0	-0.5	-0.378
Dopamine Degradation	0	-2	0	0	0	0	1
Serotonin Degradation	0	-2.236	0	0	0	-0.447	1
Androgen Signaling	0	-2	0	0	0	0.905	0
Neuroprotective Role of THOP1 in Alzheimer's Disease	0	-1.89	0	0	0.816	0.302	0
Tryptophan Degradation X (Mammalian, via Tryptamine)	0	-2	0	0	0	0	0
Noradrenaline and Adrenaline Degradation	0	-2	0	0	0	0	0
Putrescine Degradation III	0	-2	0	0	0	0	0
Synaptogenesis Signaling Pathway	1.604	0	-0.5	-0.816	-0.832	-0.316	0
Regulation Of The Epithelial Mesenchymal Transition In Development Pathway	2.236	0	0	-0.447	-2	0.277	0
Cardiac β-adrenergic Signaling	1.342	-0.447	0	-1	0.816	0.905	-1.342
Ephrin B Signaling	1.633	0	0	0	0	0.577	-1
Pancreatic Adenocarcinoma Signaling	2	0	0.447	0	-0.447	1.147	0
IL-7 Signaling Pathway	2	0	0	0	0	1.604	0
Osteoarthritis Pathway	1.667	-1.342	1	0	0.333	2.714	1.134
HIF1α Signaling	0	-1	1.667	0.816	0.229	3.015	1
Th2 Pathway	0.378	-1.265	1	0	0.447	2.524	0
p38 MAPK Signaling	0	-2	0	0	0.707	3.536	0.447
Gαs Signaling	0	-1.633	0	0	0.447	2.887	0
LPS/IL-1 Mediated Inhibition of RXR Function	-1.342	0	0	0	-1	2.837	0
Cholecystokinin/Gastrin-mediated Signaling	0	0	-1	0	-0.816	2.6	0
NF-κB Activation by Viruses	0	1	0	0	-1.342	2.683	0
ERK5 Signaling	0	0	0	0	-1.342	3.153	0
HER-2 Signaling in Breast Cancer	0.378	0	0.333	-1.342	-0.333	3.042	0
PI3K Signaling in B Lymphocytes	0.816	1.134	0.378	0	0	3.43	-0.447
Leukocyte Extravasation Signaling	1	0.707	0.378	-0.378	-0.333	3	0.378
TNFR1 Signaling	0	0	0	0	1	3.545	0
Toll-like Receptor Signaling	0	0	0	0	0	3.578	0
IL-1 Signaling	0	0	0	0	0	3.771	0
iNOS Signaling	0	0	0	0	0	3.9	0
Role of RIG1-like Receptors in Antiviral Innate Immunity	0	0	0	0	0	3.051	0
Oncostatin M Signaling	0	0	0	0	0	3.207	0
Inflammasome pathway	0	0	0	0	0	3.162	0
ERK/MAPK Signaling	0	0	0.707	0	-0.378	2.535	-1.134
Autophagy	0.447	-0.707	-0.378	0.447	0.707	2.611	0
Ferroptosis Signaling Pathway	0	0	0	0	0.707	1.671	-0.447
Type II Diabetes Mellitus Signaling	0	0	0.447	0	1	1.964	0
Activation of IRF by Cytosolic Pattern Recognition Receptors	0	0	0	0	1.667	2.041	0
Retinoic acid Mediated Apoptosis Signaling	0	0	0	0	1.342	2.673	0
Death Receptor Signaling	0.447	0	0	0	0.333	2.611	1
FAT10 Cancer Signaling Pathway	1.633	0	0	0	0.447	2.887	0
Induction of Apoptosis by HIV1	0.816	0	0	0	0.816	1.877	0
TNFR2 Signaling	1	0	0	0	0	2.668	0
RANK Signaling in Osteoclasts	1	0	0	0	0	2.357	0
MIF Regulation of Innate Immunity	1	0	0	0	0	2	0
MIF-mediated Glucocorticoid Regulation	1	0	0	0	0	1.732	0
PDGF Signaling	0	0	0.816	0	0	2.828	0
IL-9 Signaling	0	0	1	0	0	1.732	0
JAK/STAT Signaling	0	0	1.342	0	0	2.132	0
Fcγ Receptor-mediated Phagocytosis in Macrophages and Monocytes	0	1	0	0	0	1.877	0
Ceramide Signaling	0	0	0	0	-0.447	2.236	0
NGF Signaling	0	0	0.447	0	0	2.449	0
FGF Signaling	0	0	0.447	0	0	2.138	0
Estrogen-Dependent Breast Cancer Signaling	0	0	0	0	0	2.84	0

Chemokine Signaling	0	0	0	0	0	2.673	0
Role of IL-17F in Allergic Inflammatory Airway Diseases	0	0	0	0	0	2.714	0
B Cell Activating Factor Signaling	0	0	0	0	0	2.714	0
ERB2-ERBB3 Signaling	0	0	0	0	0	2.309	0
Endoplasmic Reticulum Stress Pathway	0	0	0	0	0	2.236	0
Differential Regulation of Cytokine Production in Macrophages and T Helper Cells by IL-17A and IL-17F	0	0	0	0	0	2.449	0
Differential Regulation of Cytokine Production in Intestinal Epithelial Cells by IL-17A and IL-17F	0	0	0	0	0	2.449	0
Actin Nucleation by ARP-WASP Complex	0	0	0	0	0	2.496	0
RAC Signaling	0	0	0	0	0	2.524	0
ERBB Signaling	0	0	-0.447	0	0	1.886	0
Renin-Angiotensin Signaling	0	0	-0.707	0	0	1.964	0
Gαq Signaling	0	0	-0.707	0	0	1.8	0
FLT3 Signaling in Hematopoietic Progenitor Cells	0	0.447	0	0	-0.447	1.807	0
Apelin Endothelial Signaling Pathway	0	0	0	0	-0.333	1.4	0
Tryptophan Degradation III (Eukaryotic)	0	0	0	0	0	1.342	0
Small Cell Lung Cancer Signaling	0	0	0	0	0	1.265	0
Macropinocytosis Signaling	0	0	0	0	0	1.265	0
Aryl Hydrocarbon Receptor Signaling	0	0	0	0	0.378	2.065	0
4-1BB Signaling in T Lymphocytes	0	0	0	0	0	2.111	0
Glioma Invasiveness Signaling	0	0	0	0	0	2.065	0
Renal Cell Carcinoma Signaling	0	0	0	0	0	1.897	0
IL-2 Signaling	0	0	0	0	0	1.897	0
LPS-stimulated MAPK Signaling	0	0	0	0	0	1.964	0
Role of IL-17A in Psoriasis	0	0	0	0	0	2	0
Neurotrophin/TRK Signaling	0	0	0	0	0	1.732	0
Lymphotoxin β Receptor Signaling	0	0	0	0	0	1.732	0
April Mediated Signaling	0	0	0	0	0	1.807	0
CD27 Signaling in Lymphocytes	0	0	0	0	0	1.807	0
Thrombopoietin Signaling	0	0	0	0	0	1.807	0
Role of NANOG in Mammalian Embryonic Stem Cell Pluripotency	0	0	0	0	0	1.508	0
HIPPO signaling	0	0	0	0	0	1.667	0
Prolactin Signaling	0	0	0	0	0	1.606	0
Bladder Cancer Signaling	0	0	0	0	0	1.633	0
Tumoricidal Function of Hepatic Natural Killer Cells	0	0	0	0	0	1.633	0
p70S6K Signaling	0.447	1.342	-0.816	0	0	1.414	-0.447
VDR/RXR Activation	0	2.236	0	0	0	0	0
FcγRIIB Signaling in B Lymphocytes	0	2	0	0	0	0.707	0
Fc Epsilon RI Signaling	0	0.816	-1	0	-2	0.471	0
Retinoate Biosynthesis I	1	0	0	0	-2	0	0
Sphingosine-1-phosphate Signaling	0	0	0	0	-2.236	0	0
Insulin Receptor Signaling	0	0	0	0	-2.449	0	0.816
Apelin Liver Signaling Pathway	0	0	0	0	-1.414	-0.447	0
Role of MAPK Signaling in Promoting the Pathogenesis of Influenza	0	0	0	0	-1.633	-0.728	0
Thrombin Signaling	-0.447	-1.414	0	0	-1.633	1.134	-0.447
NRF2-mediated Oxidative Stress Response	0	0	-1	1	-1	1.414	0
Glioblastoma Multiforme Signaling	0	0	-0.333	0	-1.89	0.577	-1.633
GDNF Family Ligand-Receptor Interactions	0	0	0	0	-1.342	1.291	-1
fMLP Signaling in Neutrophils	-1	1	-0.447	0	-2	1.528	0
Unfolded protein response	0	0	-1	0	-2.236	1.941	0
Gαi Signaling	0	0.816	0	0	-3.051	1.414	0
Actin Cytoskeleton Signaling	0	0.816	0	0	-2.449	1.633	-0.378
Regulation of Actin-based Motility by Rho	0	0	0	0	-2	1.941	0
Endocannabinoid Developing Neuron Pathway	0	0	0.447	0	-2.236	1.698	0
Antiproliferative Role of Somatostatin Receptor 2	0	0	0	0	-2	0.707	0
mTOR Signaling	0	0	0	0	-2	1.46	0.378
Paxillin Signaling	0	0	0	0	-2	1.155	0
RHOA Signaling	0	0	0	0	-2.236	1.291	0
Mouse Embryonic Stem Cell Pluripotency	0	0	0.816	0	-1.633	0.775	0
Acute Myeloid Leukemia Signaling	0	0	1	0	-1	0.5	0
Ovarian Cancer Signaling	0	0	1	0	-1.134	0.535	0
IL-3 Signaling	0	0	0.447	0	-1	1.698	0
HGF Signaling	0	0	0.378	0	-1	2.041	0
BMP signaling pathway	0	0	0	0	-1.342	1.667	0
Agrin Interactions at Neuromuscular Junction	0	0	0	0	-1	1.604	0
TGF-β Signaling	0	0	0	0	-0.816	1.508	0
Telomerase Signaling	0	0	0	0	-1	2.111	0
Neuregulin Signaling	0	0	0	0	-1	1.886	0
GM-CSF Signaling	0	0	0	0	-1	1.897	0
PEDF Signaling	0	0	0	0	-0.447	0.728	0.447
Angiopoietin Signaling	0	0	0	0	-0.707	1.213	0.447
VEGF Signaling	0	0	0	0	-1	0.577	-0.447
VEGF Family Ligand-Receptor Interactions	0	0	0	0	-0.707	0.258	0
Coagulation System	0	0	0	0	-1	0.302	0
BEX2 Signaling Pathway	0	0	0	0	-1	1	0
PAK Signaling	0	0	0	0	-1	1.069	0
SPINK1 General Cancer Pathway	0	0	0	0	-1.342	0.905	0
Intrinsic Prothrombin Activation Pathway	0	0	0	0	-1.342	1	0
WNT/β-catenin Signaling	0	1	1	-1	0.832	-0.447	-0.447
RHOGDI Signaling	0	0	0	1.342	0	-1.342	-1.633
UVA-Induced MAPK Signaling	0	0	-1	0	0	0.302	-2
Mevalonate Pathway I	0	0	0	0	0	-0.447	-0.816
Superpathway of Geranylgeranyldiphosphate Biosynthesis I (via Mevalonate)	0	0	0	0	0	-0.447	-1.414
Cholesterol Biosynthesis II (via 24,25-dihydrolanosterol)	0	0	0	0	0	0	-2
Coronavirus Replication Pathway	0	0	0	0	0	0	-2
Cholesterol Biosynthesis I	0	0	0	0	0	0	-2
Cholesterol Biosynthesis III (via Desmosterol)	0	0	0	0	0	0	-2
Dilated Cardiomyopathy Signaling Pathway	0	-0.378	0	-1	1.633	1	0
tRNA Splicing	0.816	0	0	-1	0	1	0
WNT/Ca+ pathway	0	0	-0.378	-1.342	0	1.5	0
Endothelin-1 Signaling	0.378	-0.816	-0.577	-1	0.302	1.029	0.707
NAD Signaling Pathway	0	-0.447	0	-1	0	0.816	0.378
STAT3 Pathway	0.816	-1	0.447	0	0.333	1.342	0.447
Semaphorin Neuronal Repulsive Signaling Pathway	1	0	1	0	0	0.655	-0.378
CD40 Signaling	1.342	0	1	0	0.447	1.528	0
IL-17A Signaling in Airway Cells	0	0	1	0	0	1	0
EGF Signaling	0	0	1.342	0	0	0.707	0
Sumoylation Pathway	-1	0	0	0	0	0	1
AMPK Signaling	0	-0.447	0	0	0	0.832	1.414
Endocannabinoid Cancer Inhibition Pathway	-1	0	-0.378	0	0	0.577	-0.816
Relaxin Signaling	-1	0	0	0	0	1.147	0
TWEAK Signaling	-1	0	0	0	-1	0.943	0
PD-1, PD-L1 cancer immunotherapy pathway	-1	0	0	0	0.816	-0.775	0
Apelin Adipocyte Signaling Pathway	1	0	0	0	0	-0.905	0
UVB-Induced MAPK Signaling	0	0	0	0	0	-0.707	0
BAG2 Signaling Pathway	0	0	0	0	0	-1.069	0
Leptin Signaling in Obesity	0	0	0	0	0	-1	0
Inhibition of Matrix Metalloproteases	0	0	0	0	0	-1.508	0
Basal Cell Carcinoma Signaling	0	0	0	0	0	-1.633	0
Apelin Pancreas Signaling Pathway	0	0	0	0	0	-1.633	0
Coronavirus Pathogenesis Pathway	0.816	0	0	0.447	0.447	0.59	0
Role of MAPK Signaling in Inhibiting the Pathogenesis of Influenza	0	0	0	0	0.816	1.147	0
CDK5 Signaling	0	0	0	0	0.378	0.832	-0.447
Complement System	0	0	0	0	0.707	0.707	-0.447
α-Adrenergic Signaling	0	0	0	0	0	0.577	0
CNTF Signaling	0	0	0	0	0	0.632	0
UVC-Induced MAPK Signaling	0	0	0	0	0	0.632	0
Role of JAK1, JAK2 and TYK2 in Interferon Signaling	0	0	0	0	0	1	0
ERBB4 Signaling	0	0	0	0	0	0.905	0
p53 Signaling	0	0	0	0	0	0.832	0
Eicosanoid Signaling	0	0	0	0	0	0.816	0
Regulation of Cellular Mechanics by Calpain Protease	0	0	0	0	0	0.816	0
IL-17A Signaling in Gastric Cells	0	0	0	0	0	0.816	0
GPCR-Mediated Integration of Enteroendocrine Signaling Exemplified by an L Cell	0	0	0.447	0	0	0.378	-0.447
PTEN Signaling	0	0	0	0	0.447	0.243	0
Inhibition of Angiogenesis by TSP1	0	0	0	0	0.447	0	0
Phospholipases	0	0	0	0	0	0	0.447
IL-22 Signaling	0	0	0	0	0	0.378	0
Role of PI3K/AKT Signaling in the Pathogenesis of Influenza	0	0	0	0	0	0.302	0
IGF-1 Signaling	0	0	0	0	0	0.277	0
ATM Signaling	0	0	0	0	0	0.258	0
MYC Mediated Apoptosis Signaling	0	0	0	0	0	0.258	0
CCR3 Signaling in Eosinophils	0	0	0	0	0	0.258	0
PCP (Planar Cell Polarity) Pathway	0	0	0	0	0	-0.277	0
GADD45 Signaling	0	0	0	0	0	0	0
TR/RXR Activation	0	0	0	0	0	0	0
Sertoli Cell-Sertoli Cell Junction Signaling	0	0	0	0	0	0	0
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	0	0	0	0	0	0	0
Agranulocyte Adhesion and Diapedesis	0	0	0	0	0	0	0
Fatty Acid Biosynthesis Initiation II	0	0	0	0	0	0	0
Regulation of the Epithelial-Mesenchymal Transition Pathway	0	0	0	0	0	0	0
Phenylalanine Degradation IV (Mammalian, via Side Chain)	0	0	0	0	0	0	0
Cancer Drug Resistance By Drug Efflux	0	0	0	0	0	0	0
Hepatic Cholestasis	0	0	0	0	0	0	0
Calcium Transport I	0	0	0	0	0	0	0
Superpathway of Citrulline Metabolism	0	0	0	0	0	0	0

Semaphorin Signaling in Neurons	0	0	0	0	0	0	0
Role of Cytokines in Mediating Communication between Immune Cells	0	0	0	0	0	0	0
FAT10 Signaling Pathway	0	0	0	0	0	0	0
Alanine Degradation III	0	0	0	0	0	0	0
Antigen Presentation Pathway	0	0	0	0	0	0	0
Ketogenesis	0	0	0	0	0	0	0
G Protein Signaling Mediated by Tubby	0	0	0	0	0	0	0
MSP-RON Signaling Pathway	0	0	0	0	0	0	0
Protein Ubiquitination Pathway	0	0	0	0	0	0	0
Airway Pathology in Chronic Obstructive Pulmonary Disease	0	0	0	0	0	0	0
Dopamine Receptor Signaling	0	0	0	0	0	0	0
Clathrin-mediated Endocytosis Signaling	0	0	0	0	0	0	0
Role of JAK1 and JAK3 in γc Cytokine Signaling	0	0	0	0	0	0	0
Communication between Innate and Adaptive Immune Cells	0	0	0	0	0	0	0
Primary Immunodeficiency Signaling	0	0	0	0	0	0	0
Prostate Cancer Signaling	0	0	0	0	0	0	0
B Cell Development	0	0	0	0	0	0	0
FAK Signaling	0	0	0	0	0	0	0
Xenobiotic Metabolism Signaling	0	0	0	0	0	0	0
Ceramide Degradation	0	0	0	0	0	0	0
IL-17A Signaling in Fibroblasts	0	0	0	0	0	0	0
Salvage Pathways of Pyrimidine Deoxyribonucleotides	0	0	0	0	0	0	0
GABA Receptor Signaling	0	0	0	0	0	0	0
β-alanine Degradation I	0	0	0	0	0	0	0
Pathogenesis of Multiple Sclerosis	0	0	0	0	0	0	0
G-Protein Coupled Receptor Signaling	0	0	0	0	0	0	0
Polyamine Regulation in Colon Cancer	0	0	0	0	0	0	0
Sphingosine and Sphingosine-1-phosphate Metabolism	0	0	0	0	0	0	0
Caveolar-mediated Endocytosis Signaling	0	0	0	0	0	0	0
IL-12 Signaling and Production in Macrophages	0	0	0	0	0	0	0
Hepatic Fibrosis / Hepatic Stellate Cell Activation	0	0	0	0	0	0	0
Gap Junction Signaling	0	0	0	0	0	0	0
Germ Cell-Sertoli Cell Junction Signaling	0	0	0	0	0	0	0
Methylglyoxal Degradation I	0	0	0	0	0	0	0
Human Embryonic Stem Cell Pluripotency	0	0	0	0	0	0	0
Glutathione Redox Reactions I	0	0	0	0	0	0	0
Tight Junction Signaling	0	0	0	0	0	0	0
Citrulline Degradation	0	0	0	0	0	0	0
Zymosterol Biosynthesis	0	0	0	0	0	0	0
nNOS Signaling in Neurons	0	0	0	0	0	0	0
Atherosclerosis Signaling	0	0	0	0	0	0	0
Circadian Rhythm Signaling	0	0	0	0	0	0	0
Serotonin Receptor Signaling	0	0	0	0	0	0	0
Phagosome Maturation	0	0	0	0	0	0	0
Role of OCT4 in Mammalian Embryonic Stem Cell Pluripotency	0	0	0	0	0	0	0
Ketolysis	0	0	0	0	0	0	0
Role of MAPK Signaling in the Pathogenesis of Influenza	0	0	0	0	0	0	0
GDP-L-fucose Biosynthesis I (from GDP-D-mannose)	0	0	0	0	0	0	0
Inositol Pyrophosphates Biosynthesis	0	0	0	0	0	0	0
Palmitate Biosynthesis I (Animals)	0	0	0	0	0	0	0
Axonal Guidance Signaling	0	0	0	0	0	0	0
Cysteine Biosynthesis/Homocysteine Degradation	0	0	0	0	0	0	0
Oxidative Ethanol Degradation III	0	0	0	0	0	0	0
IL-4 Signaling	0	0	0	0	0	0	0
Growth Hormone Signaling	0	0	0	0	0	0	0
Citrulline-Nitric Oxide Cycle	0	0	0	0	0	0	0
Tryptophan Degradation to 2-amino-3-carboxymuconate Semialdehyde	0	0	0	0	0	0	0
Role of Osteoblasts, Osteoclasts and Chondrocytes in Rheumatoid Arthritis	0	0	0	0	0	0	0
Oleate Biosynthesis II (Animals)	0	0	0	0	0	0	0
Melatonin Degradation II	0	0	0	0	0	0	0
Role of Tissue Factor in Cancer	0	0	0	0	0	0	0
IL-10 Signaling	0	0	0	0	0	0	0
Th1 and Th2 Activation Pathway	0	0	0	0	0	0	0
Cellular Effects of Sildenafil (Viagra)	0	0	0	0	0	0	0
Role of JAK2 in Hormone-like Cytokine Signaling	0	0	0	0	0	0	0
Alanine Biosynthesis II	0	0	0	0	0	0	0
Adipogenesis pathway	0	0	0	0	0	0	0
Chronic Myeloid Leukemia Signaling	0	0	0	0	0	0	0
Granulocyte Adhesion and Diapedesis	0	0	0	0	0	0	0
PXR/RXR Activation	0	0	0	0	0	0	0
Glucocorticoid Receptor Signaling	0	0	0	0	0	0	0
Role of IL-17A in Arthritis	0	0	0	0	0	0	0
Acetyl-CoA Biosynthesis I (Pyruvate Dehydrogenase Complex)	0	0	0	0	0	0	0
Extrinsic Prothrombin Activation Pathway	0	0	0	0	0	0	0
Iron homeostasis signaling pathway	0	0	0	0	0	0	0
NAD biosynthesis II (from tryptophan)	0	0	0	0	0	0	0
RAR Activation	0	0	0	0	0	0	0
Molecular Mechanisms of Cancer	0	0	0	0	0	0	0
Isoleucine Degradation I	0	0	0	0	0	0	0
Virus Entry via Endocytic Pathways	0	0	0	0	0	0	0
Spermidine Biosynthesis I	0	0	0	0	0	0	0
Parkinson's Signaling	0	0	0	0	0	0	0
FXR/RXR Activation	0	0	0	0	0	0	0
Maturity Onset Diabetes of Young (MODY) Signaling	0	0	0	0	0	0	0
Remodeling of Epithelial Adherens Junctions	0	0	0	0	0	0	0
Role of JAK family kinases in IL-6-type Cytokine Signaling	0	0	0	0	0	0	0
Apelin Muscle Signaling Pathway	0	0	0	0	0	0	0

	CT-2A Vehicle vs. D2C7	CT-2A Vehicle vs. CD40	CT-2A-Vehicle vs. Combo	CD31	CD4	CD8	MΦ
Systemic Lupus Erythematosus In B Cell Signaling Pathway	6.194	2.121	2.4	0.775	0	-0.632	1.732
Crosstalk between Dendritic Cells and Natural Killer Cells	4.583	2.646	2.828	-0.816	0	0	2.646
Role of Hypercytokinemia/hyperchemokinemia in the Pathogenesis of Influenza	5.831	0	3.606	0	0	0	0
Neuroinflammation Signaling Pathway	5.821	0.816	1.886	0.277	1.134	-0.302	1.604
Necroptosis Signaling Pathway	3.307	2.449	2.333	0	0	0	0.816
Acute Phase Response Signaling	5.286	1.633	1.155	0	0	0	0
Production of Nitric Oxide and Reactive Oxygen Species in Macrophages	4.16	1.667	1.732	0	0	0.707	1
IL-15 Production	3.286	1.89	2.333	-0.816	-1	0	0
Phagosome Formation	5.883	3	-1.622	-1.667	-2.84	-1.886	0.378
IL-17 Signaling	4.522	1.414	1	1.134	0	0	0
TREM1 Signaling	4.707	0	1.633	0	0	2	0
Role of PKR in Interferon Induction and Antiviral Response	3.683	0	2.333	0	0	1	0
Th17 Activation Pathway	3.9	0	2	1.633	2.236	0.707	0
T Cell Exhaustion Signaling Pathway	2.236	1	2.53	0.905	0	0.707	0.816
Interferon Signaling	2.84	0	2.828	0	0	0	0
Role of Pattern Recognition Receptors in Recognition of Bacteria and Viruses	3.413	0	2.236	0	0	-1.342	0
Xenobiotic Metabolism AHR Signaling Pathway	2.5	1.633	1.342	0	0	-1.342	0
Tumor Microenvironment Pathway	5.091	0.577	-0.426	0.302	0.816	1.414	0.632
Th1 Pathway	3.674	0	1.508	1.069	0	0	1
Natural Killer Cell Signaling	3.781	1	0	0.5	0	1.134	0

"N/A" values were changed to 0. The z scores of each row were summed, then the summed values were ranked from highest to lowest. A heatmap of the rows containing the top 20 summed values was created using GraphPad Prisim version 9.

Upstream Regulators	CT-2A Vehicle Vs. D2C7-Day 9 - 2021-08-27 01:54 PM	CT-2A Vehicle Vs. CD40 Day 9-P 0.05 - 2021-08-27 01:49 PM	CT-2A-Vehicle Vs. D2C7+CD40 Day 9 P 0.05 - 2021-08-27 01:58 PM
IL1RN	-5.638	0	-3.988
SCGB1A1	-2.489	-1.98	-1.987
IL37	-3.601	0	-2.373
IL1B	11.147	2.597	5.993
IFNG	12.764	2.748	7.555
TNF	13.219	3.069	6.297
Interferon alpha	8.851	2.132	6.174
IFNL1	6.439	0	4.595
IL33	6.689	1.155	3.061
TNFSF11	7.1	2.144	2.71
CSF2	7.512	2.419	2.464
OSM	8.699	2.071	3.808
IL1A	8.099	1.527	4.13
IFNA2	6.879	2.276	4.854
CD40LG	6.399	2.257	4.144
Tnf (family)	6.72	1.825	3.781
IL6	8.312	3.021	3.483
IL2	7.633	3.68	3.827
IL1	7.185	3.016	4.154
cytokine	6.709	3.218	4.087
CSF1	3.89	-3.048	-0.7
IL4	5.445	1.24	0.064
EDN1	5.365	1.969	0.823
IL5	6.737	0	0.662
PRL	5.831	0	0.976
IFNB1	5.137	2.87	5.032
IL23A	3.537	1.964	2.759
PF4	3.424	2.433	3.08
IL12B	3.609	1.437	2.516
IL13	4.638	1.81	2.522
IL12 (family)	4.061	1.767	2.552
IL22	4.234	1.959	2.946
IL21	4.961	3.311	3.343
IFNA4	4.677	2.433	3.729
IL17A	6.502	2.46	3.006
CSF	5.657	2.449	3
TNFSF12	5.882	2.414	3.73
MIF	4.576	1.195	2.951
IL12 (complex)	5.041	1.33	3.116
IL18	5.499	1.599	3.989
IFN alpha/beta	5.146	1.824	3.25
Ifn	5.833	1.706	3.254
IL3	4.959	0.063	1.941
CXCL12	4.705	0	1.278
IL27	4.258	0.032	2.346
IL36A	4.049	0	2.807
IFNE	4.111	0	3
IFN type 1	4.043	0	2.979
IFNA1/IFNA13	4.573	0	3.506
IFN Beta	5.586	0	3.385
Ifn gamma	5.174	0	3.527
IL15	5.081	0.041	3.199
EBI3	2.212	1.067	2.465
THPO	2.64	1.455	2.602
IL12A	2.815	0.966	2.607

IL7	3.75	2.006	1.722
IL24	3.133	1.159	1.182
CCL11	3.27	1.117	1.556
Pro-inflammatory Cytokine	3.221	1.016	1.813
C5	3.77	0	1.452
CCL5	3.786	0	1.858
IL32	3.094	0	1.656
TNFSF15	2.941	0	1.539
CXCL1	2.804	0	2
TNFSF14	2.923	0	1.904
IL17C	2.618	0	2.227
CCL3	2.293	0	1.974
FLT3LG	2.493	0	1.987
IL36B	2.412	0	1.981
TNFSF10	3.377	0.633	2.623
Ccl2	3.753	0	2.337
IFNL3	3.653	0	2.577
LTA	3.499	0	2.353
TSLP	3.361	0	2.397
NAMPT	3.398	0	2.385
Lymphotoxin	2.97	0	2.425
IL17F	3.221	0	2.15
IFNK	3.162	0	2.236
CXCL2	3.067	0	2.209
CXCL3	3.112	0	2.19
IL10	-0.318	0.538	-3.364
CCL22	-2.211	0	0
WNT5A	-0.559	-0.173	-1.482
CXCL5	0	0	-1.225
IFN Lambda	0.854	0	0
IL25	0.604	0	0.168
TIMP1	0.508	0	0
CTF1	0.61	0	0
CXCL8	1.647	1.949	-0.271
WNT1	1.884	0	-1.949
EPO	2.949	-1.439	-0.575
Growth hormone	2.357	-1.414	-0.504
CSF3	4.072	0.023	-1.016
IFNL4	3.141	0	0
TNFSF13B	3.713	0	0
LIF	3.755	0	-0.102
IL9	1.618	-1.131	0.981
IL23	2.198	0	0.842
CCL2	2.423	0	1.136
CXCL10	2.124	0	1.524
TNFSF9	2.155	0	1.342
FASLG	1.27	0.762	1.171
CX3CL1	1.509	0.651	0.498
CCL3L3	1.325	0	0.985
CCL4	0.767	0	1.199
IL11	1.433	0	-0.647
WNT3A	1.973	0.079	-0.726
CRH	1.969	0.123	-0.451
SPP1	2.375	0.548	0.319
Il3	1.733	0	0
MAC	1.948	0	0.063
CXCL6	1.923	0	0
Endothelin	1.914	0	0

CNTF	2	0	0
Ccl6	1.982	0	0
IL26	1.969	0	0
IL17B	1.96	0	0
AIMP1	2.392	0	0
IFNW1	2.449	0	0
IL19	2.412	0	0
IL17a dimer	2.423	0	0
Ifnz (includes others)	2.433	0	0
IL-17f dimer	2.219	0	0
IL36G	2.183	0	0
TNFSF4	2.191	0	0
IFNA21	2.193	0	0
IFNA6	2.197	0	0
IFNA8	2.197	0	0
IFNA16	2.197	0	0
IFNA10	2.197	0	0
IFNA14	2.197	0	0
IFNA7	2.197	0	0
IFNA5	2.197	0	0
CLCF1	0	0	0
TH1 Cytokine	0	0	0
XCL1	0	0	0
CMTM6	0	0	0
SOCS5	0	0	0
PTK	0	0	0
CCL18	0	0	0
CMTM4	0	0	0
DKK3	0	0	0
CCL1	0	0	0
LTB	0	0	0
FAM3B	0	0	0
IL16	0	0	0
VAV3	0	0	0
CCL7	0	0	0
IFNA17	0	0	0
CCL17	0	0	0
CD70	0	0	0
CCL15	0	0	0
CXCL9	0	0	0
TH2 Cytokine	0	0	0
Eotaxin	0	0	0
CCL20	0	0	0
TH17 Cytokine	0	0	0
PPBP	0	0	0
CXCL17	0	0	0
CCL19	0	0	0

	CT-2A Vehicle Vs. D2C7	CT-2A Vehicle Vs. CD40	CT-2A-Vehicle Vs. D2C7+CD40
IFN-g	12.764	2.748	7.555
TNF-α	13.219	3.069	6.297
IL-1b	11.147	2.597	5.993
IL-2	7.633	3.68	3.827
IL-6	8.312	3.021	3.483
GM-CSF	7.512	2.419	2.464
IL-17A	6.502	2.46	3.006
IL-21	4.961	3.311	3.343
IL-18	5.499	1.599	3.989
IL-12p70	5.041	1.33	3.116
IL-13	4.638	1.81	2.522
IL-15	5.081	0.041	3.199
IL-7	3.75	2.006	1.722
IL-5	6.737	0	0.662
IL-4	5.445	1.24	0.064
IL-27	4.258	0.032	2.346
MCP-1	3.753	0	2.337
CCL-11	3.27	1.117	1.556
RANTES	3.786	0	1.858
KC	2.804	0	2
MIP-1a	2.293	0	1.974
IP-10	2.124	0	1.524

“N/A” values were changed to 0. The z scores of each row were summed, then the summed values were ranked from highest to lowest. A heatmap of the rows containing the top 22 summed values was created using GraphPad Prisim version 9.