

Analysis Name: merged\_CD44\_Co-Expression - core  
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## Analysis settings

### [View](#)

Reference set: Ingenuity Knowledge Base (Genes Only)

Relationship to include: Direct and Indirect

Includes Endogenous Chemicals

Optional Analyses:

### Filter Summary:

Consider only molecules and/or relationships where

(confidence = Experimentally Observed OR High (predicted)) AND

(tissues = Dorsal Root Ganglion OR B lymphocytes not otherwise specified OR Central memory helper T cells OR Nervous System not otherwise specified OR Pancreas OR BDCA-3+ dendritic cells OR Other Cells OR Small Intestine OR Substantia Nigra OR Activated CD56bright NK cells OR Immature monocyte-derived dendritic cells OR Macrophages OR Other Tissues and Primary Cells OR Skeletal Muscle OR Other NK cells OR Amygdala OR Central memory cytotoxic T cells OR Large Intestine OR Activated helper T cells OR Effector memory RA+ cytotoxic T cells OR Kidney OR Other Immune cells OR Prostate Gland OR Neutrophils OR Immune cells not otherwise specified OR Other B lymphocytes OR Cells not otherwise specified OR Other T lymphocytes OR Organ Systems not otherwise specified OR CD56bright NK cells OR Hippocampus OR Stomach OR Lung OR Salivary Gland OR Vd2 Gamma-delta T cells OR Vd1 Gamma-delta T cells OR BDCA-1+ dendritic cells OR Cytotoxic T cells OR T lymphocytes not otherwise specified OR Heart OR Dendritic cells not otherwise specified OR Effector memory helper T cells OR Memory B cells OR Placenta OR Pituitary Gland OR Hypothalamus OR Cerebral Cortex OR Tissues and Primary Cells not otherwise specified

OR Th1 cells OR Th2 cells OR Other Nervous System OR Activated Vd1 Gamma-delta T cells OR Activated CD56dim NK cells OR Effector T cells OR Testis OR Murine NKT cells OR Retina OR Olfactory Bulb OR Natural T-regulatory cells OR Effector memory cytotoxic T cells OR Uterus OR Plasmacytoid dendritic cells OR Adipose OR Activated Vd2 Gamma-delta T cells OR Mature monocyte-derived dendritic cells OR Naive helper T cells OR Bladder OR Spleen OR Thymus OR NK cells not otherwise specified OR Epidermis OR Liver OR Other Organ Systems OR Ovary OR Cerebellum OR Monocytes OR Naive B cells OR Mammary Gland OR Monocyte-derived macrophage OR CD56dim NK cells OR Other Dendritic cells) AND  
(data sources = ClinicalTrials.gov OR Gene Ontology (GO) OR GVK Biosciences OR HumanCyc OR Ingenuity Expert Findings OR Ingenuity ExpertAssist Findings OR Kyoto Encyclopedia of Genes and Genomes (KEGG) OR Mouse Genome Database (MGD) OR Obesity Gene Map Database)

Top Networks

ID	Associated Network Functions	Score
1	Cardiovascular System Development and Function, Organismal Development, Organ Morphology	39
2	Cell Death and Survival, Cell-To-Cell Signaling and Interaction, Tissue Development	28
3	Cellular Development, Cellular Growth and Proliferation, Cancer	17
4	Lipid Metabolism, Respiratory Disease, Small Molecule Biochemistry	11
5	Cancer, DNA Replication, Recombination, and Repair, Developmental Disorder	2

## Top Bio Functions

### Diseases and Disorders

Name	p-value	# Molecules
Cancer	2.31E-05 - 1.16E-02	25
Gastrointestinal Disease	4.44E-05 - 1.16E-02	17
Organismal Injury and Abnormalities	1.15E-04 - 1.33E-02	7
Renal and Urological Disease	6.39E-04 - 2.92E-03	3
Reproductive System Disease	7.12E-04 - 1.16E-02	4

### Molecular and Cellular Functions

Name	p-value	# Molecules
Cellular Movement	1.01E-06 - 1.42E-02	16
Cell Death and Survival	6.55E-06 - 1.42E-02	10
Cell-To-Cell Signaling and Interaction	8.37E-06 - 1.24E-02	11
Small Molecule Biochemistry	4.78E-05 - 1.20E-02	17
Lipid Metabolism	5.00E-05 - 1.20E-02	9

### Physiological System Development and Function

Name	p-value	# Molecules
Embryonic Development	8.37E-06 - 9.05E-03	12
Nervous System Development and Function	8.37E-06 - 1.39E-02	13
Tissue Development	8.37E-06 - 1.39E-02	19
Cardiovascular System Development and Function	8.52E-06 - 1.22E-02	14
Organismal Development	8.52E-06 - 1.16E-02	14

## Top Canonical Pathways

Name	p-value	Ratio
Macropinocytosis Signaling	1.03E-03	3/76 (0.039)
Clathrin-mediated Endocytosis Signaling	2.05E-03	4/196 (0.02)
ILK Signaling	2.05E-03	4/192 (0.021)
Sulfate Activation for Sulfonation	5.84E-03	1/8 (0.125)
eNOS Signaling	6.6E-03	3/152 (0.02)

## Top Molecules

## Other up-regulated

Molecules	Exp. Value	Exp. Chart
CD44*	↑0.866	
GJA1	↑0.798	
VIM	↑0.796	
PLA2G4A*	↑0.772	
ELL2*	↑0.771	
FRMD6*	↑0.763	
CKLF	↑0.761	
CAV1*	↑0.760	
PDGFC	↑0.759	
DLC1	↑0.757	

## Other down-regulated

Molecules	Exp. Value	Exp. Chart
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## Top Upstream Regulators

Upstream Regulator	p-value of overlap	Predicted Activation State
BMI1	1.71E-06	
TAZ	9.56E-06	
Erm	3.46E-05	
HRAS	4.93E-05	
miR-199a-3p (and other miRNAs w/seed CAGUAGU)	1.21E-04	

## Top Tox Lists

Name	p-value	Ratio
Cardiac Hypertrophy	2.43E-03	5/323 (0.015)
Cardiac Fibrosis	1.26E-02	3/166 (0.018)
Increases Liver Steatosis	1.33E-02	2/60 (0.033)
Cytochrome P450 Panel - Substrate is an Eicosanoid (Rat)	1.45E-02	1/5 (0.2)
Cytochrome P450 Panel - Substrate is an Eicosanoid (Mouse)	1.74E-02	1/6 (0.167)

## Top Tox Functions

### Assays: Clinical Chemistry and Hematology

Name	p-value	# Molecules
Decreased Levels of Albumin	2.92E-03 - 1.16E-02	1
Increased Levels of Blood Urea Nitrogen	3.46E-02 - 3.46E-02	1
Increased Levels of Creatinine	7.61E-02 - 7.61E-02	1

### Cardiotoxicity

Name	p-value	# Molecules
Cardiac Hypertrophy	1.76E-03 - 6.52E-02	5
Cardiac Proliferation	2.92E-03 - 2.92E-03	1
Pulmonary Hypertension	2.92E-03 - 2.89E-02	1
Cardiac Dilation	5.50E-03 - 5.50E-03	2
Congenital Heart Anomaly	1.74E-02 - 1.74E-02	1

### Hepatotoxicity

Name	p-value	# Molecules
Hepatocellular Carcinoma	2.15E-03 - 1.47E-01	7
Liver Hyperplasia/Hyperproliferation	2.15E-03 - 1.47E-01	7
Liver Damage	5.84E-03 - 7.45E-02	2
Liver Proliferation	7.46E-03 - 7.46E-03	3
Liver Cholestasis	1.16E-02 - 1.74E-02	1

### Nephrotoxicity

Name	p-value	# Molecules
Renal Proliferation	8.07E-03 - 8.07E-03	3
Renal Hypertrophy	2.89E-02 - 2.89E-02	1

Renal Damage	4.86E-02 - 4.86E-02	1
Renal Necrosis/Cell Death	1.47E-01 - 4.66E-01	3
Renal Hydronephrosis	2.23E-01 - 2.23E-01	1