

Analysis Name: neg-merged_CD44_Co-Expressio - core

Analysis Creation Date: 2012-11-07

Build version: 172788

Content version: 14197757 (Release Date: 2012-08-11)

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	Connective Tissue Development and Function, Tissue Morphology, Nervous System Development and Function	49
2	Lipid Metabolism, Small Molecule Biochemistry, Cardiovascular System Development and Function	38
3	Cell Death and Survival, Cancer, Cell-To-Cell Signaling and Interaction	22
4	Cellular Development, Hematological System Development and Function, Hematopoiesis	12
5	Cellular Assembly and Organization, Embryonic Development, Organ Development	2

Top Bio Functions

Diseases and Disorders

Name	p-value	# Molecules
Inflammatory Response	1.96E-04 - 4.71E-02	7
Cardiovascular Disease	1.77E-03 - 4.36E-02	7
Organismal Injury and Abnormalities	1.77E-03 - 4.36E-02	6
Renal and Urological Disease	1.77E-03 - 4.71E-02	5
Cancer	3.70E-03 - 4.71E-02	10

Molecular and Cellular Functions

Name	p-value	# Molecules
Cell-To-Cell Signaling and Interaction	1.96E-04 - 4.36E-02	6
Cellular Function and Maintenance	1.96E-04 - 3.64E-02	17
Cellular Movement	7.26E-04 - 4.71E-02	10
Cell Death and Survival	1.02E-03 - 5.00E-02	15
Cell Morphology	2.80E-03 - 4.36E-02	17

Physiological System Development and Function

Name	p-value	# Molecules
Connective Tissue Development and Function	5.70E-04 - 4.75E-02	10
Tissue Morphology	5.70E-04 - 4.75E-02	13
Nervous System Development and Function	5.95E-04 - 4.39E-02	16
Organ Morphology	5.95E-04 - 4.71E-02	13
Embryonic Development	2.80E-03 - 4.84E-02	12

Top Canonical Pathways

Name	p-value	Ratio
Uracil Degradation II (Reductive)	1.84E-02	1/12 (0.083)
Thymine Degradation	1.84E-02	1/12 (0.083)
Acetyl-CoA Biosynthesis I (Pyruvate Dehydrogenase Complex)	2.57E-02	1/12 (0.083)
Chondroitin Sulfate Degradation (Metazoa)	5.07E-02	1/23 (0.043)
Dermatan Sulfate Degradation (Metazoa)	5.42E-02	1/23 (0.043)

Top Molecules

Other up-regulated

Molecules	Exp. Value	Exp. Chart
CD44*	↑1.000	

Other down-regulated

Molecules	Exp. Value	Exp. Chart
DGKQ	↓-0.786	
ELL3*	↓-0.774	
PROCA1	↓-0.756	
DYRK2*	↓-0.754	
SEMA6A	↓-0.747	
GAS1 (includes EG:14451)*	↓-0.745	
PAX5	↓-0.732	
GPR173*	↓-0.730	
ATF5*	↓-0.729	
ZNF174*	↓-0.728	

Top Upstream Regulators

Upstream Regulator	p-value of overlap	Predicted Activation State
HLX	2.38E-03	
CD38	3.72E-03	
capsular polysaccharide	4.05E-03	
HOOK3	4.05E-03	
SRRM1	4.05E-03	

Top Tox Lists

Name	p-value	Ratio
Negative Acute Phase Response Proteins	2.93E-02	1/8 (0.125)
LXR/RXR Activation	7.72E-02	2/124 (0.016)
Acute Renal Failure Panel (Rat)	2.06E-01	1/62 (0.016)
Increases Renal Damage	2.09E-01	1/63 (0.016)
Hypoxia-Inducible Factor Signaling	2.29E-01	1/70 (0.014)

Top Tox Functions

Assays: Clinical Chemistry and Hematology

Name	p-value	# Molecules
Decreased Levels of Albumin	4.00E-02 - 4.00E-02	1
Increased Levels of Blood Urea Nitrogen	4.36E-02 - 4.36E-02	1
Increased Levels of Creatinine	9.54E-02 - 9.54E-02	1

Cardiotoxicity

Name	p-value	# Molecules
Cardiac Arrhythmia	3.70E-03 - 3.70E-03	1
Cardiac Infarction	4.35E-01 - 4.35E-01	1
Heart Failure	5.75E-01 - 5.75E-01	1

Hepatotoxicity

Name	p-value	# Molecules
Liver Hepatitis	2.93E-02 - 2.93E-02	1
Liver Fibrosis	6.81E-02 - 6.81E-02	1
Liver Cholestasis	1.97E-01 - 1.97E-01	1
Liver Inflammation	3.56E-01 - 3.56E-01	1
Hepatocellular Carcinoma	4.13E-01 - 4.13E-01	3

Nephrotoxicity

Name	p-value	# Molecules
Renal Damage	1.77E-03 - 1.77E-03	2
Renal Necrosis/Cell Death	6.81E-02 - 1.87E-01	2
Glomerular Injury	2.52E-01 - 2.52E-01	1
Renal Proliferation	4.09E-01 - 4.09E-01	1

Kidney Failure

4.60E-01 - 4.60E-01 1