

Analysis Name: genes for IPA - 2013-01-05 12:52

Analysis Creation Date: 2013-01-05

Build version: 192063

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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: My Pathways My List

Filter Summary:

Consider only molecules and/or relationships where

(species = Uncategorized OR Human) AND

(confidence = Experimentally Observed) AND

(tissues/cell lines = Cytotoxic T cells OR Activated CD56bright NK cells OR Salivary Gland OR Immature monocyte-derived dendritic cells OR Lung OR Central memory cytotoxic T cells OR Large Intestine OR K-562 OR MOLT-4 OR CD56bright NK cells OR Macrophages OR BDCA-1+ dendritic cells OR Kidney OR Prostate Gland OR Testis OR SR OR Effector memory cytotoxic T cells OR Bladder OR Activated Vd2 Gamma-delta T cells OR Mammary Gland OR Naive B cells OR CCRF-CEM OR Activated Vd1 Gamma-delta T cells OR Central memory helper T cells OR Skeletal Muscle OR Liver OR Epidermis OR Ovary OR Naive helper T cells OR Jurkat OR RAW 264.7 OR Activated helper T cells OR Heart OR Small Intestine OR BDCA-3+ dendritic cells OR Thymus OR Uterus OR Murine NKT cells OR Plasmacytoid dendritic cells OR Other Tissues and Primary Cells OR Stomach OR Memory B cells OR Monocytes OR Retina OR Vd2 Gamma-delta T cells OR Effector memory helper T cells OR Mature monocyte-derived dendritic cells OR Neutrophils OR Effector memory RA+ cytotoxic T cells OR Pancreas OR Th2 cells OR Spleen

OR Adipose OR HL-60 OR Activated CD56dim NK cells OR Placenta OR Vd1 Gamma-delta T cells OR THP-1 OR Natural T-regulatory cells OR Th1 cells OR Monocyte-derived macrophage OR Effector T cells OR CD56dim NK cells) AND
(data sources = BIND OR BIOGRID OR Cognition OR DIP OR Ingenuity Expert Findings OR Ingenuity ExpertAssist Findings OR INTACT OR Interactome studies OR MINT OR MIPS OR TarBase)

Top Networks

ID	Associated Network Functions	Score
1	Gene Expression, Organ Morphology, Skeletal and Muscular System Development and Function	35
2	DNA Replication, Recombination, and Repair, Gene Expression, Cellular Function and Maintenance	10

Top Bio Functions

Diseases and Disorders

Name	p-value	# Molecules
Cancer	5.42E-06 - 4.58E-02	12
Hematological Disease	5.42E-06 - 1.93E-02	8
Immunological Disease	8.31E-05 - 1.04E-02	6
Developmental Disorder	1.15E-03 - 4.33E-02	5
Hereditary Disorder	1.15E-03 - 2.82E-02	5

Molecular and Cellular Functions

Name	p-value	# Molecules
Gene Expression	5.46E-09 - 2.06E-02	13
Cell Cycle	2.79E-06 - 2.57E-02	5
Cellular Development	2.09E-05 - 4.08E-02	7
Cellular Growth and Proliferation	2.09E-05 - 4.08E-02	7
Cell Death and Survival	1.70E-04 - 3.64E-02	8

Physiological System Development and Function

Name	p-value	# Molecules
Cardiovascular System Development and Function	2.38E-05 - 5.19E-03	2
Embryonic Development	2.38E-05 - 2.95E-02	4
Organ Development	2.38E-05 - 5.19E-03	3
Organismal Development	2.38E-05 - 5.19E-03	3
Tissue Development	2.38E-05 - 1.16E-02	5

Top Canonical Pathways

Name	p-value	Ratio
Phospholipase C Signaling	1.79E-04	4/256 (0.016)
HMGB1 Signaling	2.22E-04	3/99 (0.03)
DNA Methylation and Transcriptional Repression Signaling	2.99E-04	2/23 (0.087)
Hereditary Breast Cancer Signaling	3.84E-04	3/123 (0.024)
Notch Signaling	1.03E-03	2/41 (0.049)

Top Molecules

Fold Change up-regulated

Molecules	Exp. Value	Exp. Chart
CSRP2BP	1.000	
EHMT2	1.000	
HDAC2	1.000	
KAT7	1.000	
KAT2A	1.000	
KAT6B	1.000	
PAK1	1.000	
RNF20	1.000	
SETD2	1.000	
SUV420H1	1.000	

Fold Change down-regulated

Molecules	Exp. Value	Exp. Chart
RPS6KA3	-1.000	
PRMT2	-1.000	
NOTCH2	-1.000	

NOTCH1	-1.000
HDAC5	-1.000
EP300	-1.000
DNMT3A	-1.000

Top Upstream Regulators

Upstream Regulator	p-value of overlap	Predicted Activation State
curcumin	2.83E-06	
mir-34	2.45E-05	
miR-34a-5p (and other miRNAs w/seed GGCAGUG)	1.33E-04	
POFUT1	9.63E-04	
PCNA	9.63E-04	

Top My Lists

Name	p-value	Ratio
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Top My Pathways

Name	p-value	Ratio
Merged networks	6.93E-02	4/1404 (0.003)
FASN malignancy pathway	1.1E-01	1/142 (0.007)
NRF2-mediated Oxidative Stress Response	2.05E-01	1/194 (0.005)

Top Tox Lists

Name	p-value	Ratio
Cell Cycle: G1/S Checkpoint Regulation	2.7E-03	2/60 (0.033)
Cardiac Hypertrophy	8.11E-03	3/326 (0.009)
RAR Activation	2.04E-02	2/171 (0.012)
NF-κB Signaling	2.08E-02	2/173 (0.012)
Increases Cardiac Dilation	3.45E-02	1/27 (0.037)

Top Tox Functions**Cardiotoxicity**

Name	p-value	# Molecules
Cardiac Hypertrophy	2.27E-03 - 4.33E-02	2
Heart Failure	1.55E-01 - 1.55E-01	1

Hepatotoxicity

Name	p-value	# Molecules
Liver Cirrhosis	5.46E-03 - 5.46E-03	2
Hepatocellular Carcinoma	4.97E-01 - 4.97E-01	1
Liver Hyperplasia/Hyperproliferation	4.97E-01 - 4.97E-01	1

Nephrotoxicity

Name	p-value	# Molecules
Renal Necrosis/Cell Death	3.64E-02 - 6.79E-02	2