



Analysis Name: Volcano_Summary_IFT57KO_New - 2024-08-05 01:57 PM
Analysis Creation Date: 2024-08-05
Build version: exported
Content version: 111725566 (Release Date: 2024-03-21)

Experiment Metadata

Name	Value
------	-------

Analysis Settings

Top Canonical Pathways

Name	p-value	Overlap
Axonal Guidance Signaling	5.51E-09	10.0 % 51/510
Integrin cell surface interactions	8.92E-09	21.2 % 18/85
Extracellular matrix organization	1.53E-06	16.0 % 17/106
Degradation of the extracellular matrix	1.41E-05	18.2 % 12/66
Collagen biosynthesis and modifying enzymes	1.66E-05	17.9 % 12/67

Top Upstream Regulators

Upstream Regulators

Name	p-value	Predicted Activation
TNF	8.91E-22	Inhibited
TGFB1	2.46E-17	Inhibited
IL1B	4.18E-17	Inhibited
PGR	7.39E-17	
beta-estradiol	1.91E-16	Inhibited

Causal Network

Name	p-value	Predicted Activation
dantrolene	3.67E-23	Activated
IL13-downregulated genes for extracellular proteins	6.83E-23	Inhibited
lenalidomide	3.80E-22	
malondialdehyde	3.89E-22	Inhibited
levonorgestrel	5.84E-22	Activated

Top Diseases and Bio Functions

Diseases and Disorders

Name	p-value range	# Molecules
Cancer	1.33E-03 - 2.56E-62	980
Organismal Injury and Abnormalities	1.33E-03 - 2.56E-62	996
Gastrointestinal Disease	1.30E-03 - 7.64E-46	907
Endocrine System Disorders	1.10E-03 - 1.40E-35	872
Reproductive System Disease	1.20E-03 - 3.43E-35	765

Molecular and Cellular Functions

Name	p-value range	# Molecules
Cellular Movement	1.31E-03 - 2.34E-16	334
Cellular Assembly and Organization	1.09E-03 - 2.31E-09	258
Cellular Function and Maintenance	1.09E-03 - 2.31E-09	216
Cellular Development	1.33E-03 - 3.55E-09	383
Cellular Growth and Proliferation	1.33E-03 - 3.55E-09	372

Physiological System Development and Function

Name	p-value range	# Molecules
Cardiovascular System Development and Function	1.30E-03 - 1.43E-13	208
Organismal Development	1.30E-03 - 1.43E-13	353

Embryonic Development	1.30E-03 - 4.27E-10	247
Tissue Development	1.32E-03 - 9.68E-10	343
Hematological System Development and Function	1.24E-03 - 6.08E-09	215

Top Tox Functions

Assays: Clinical Chemistry and Hematology

Name	p-value range	# Molecules
Increased Levels of ALT	1.00E00 - 3.34E-03	5
Increased Levels of Alkaline Phosphatase	1.83E-02 - 1.83E-02	8
Increased Levels of Hematocrit	2.78E-02 - 2.78E-02	9
Increased Levels of Bilirubin	8.07E-02 - 8.07E-02	1
Increased Levels of Albumin	3.96E-01 - 2.55E-01	2

Cardiotoxicity

Name	p-value range	# Molecules
Cardiac Dysfunction	1.00E00 - 8.45E-07	55
Cardiac Infarction	2.16E-01 - 5.14E-06	36
Cardiac Arteriopathy	5.51E-01 - 1.92E-05	38
Congenital Heart Anomaly	1.00E00 - 2.37E-05	39
Cardiac Enlargement	1.00E00 - 4.20E-05	67

Hepatotoxicity

Name	p-value range	# Molecules
Liver Hyperplasia/Hyperproliferation	1.00E00 - 1.14E-23	516
Liver Fibrosis	1.00E00 - 4.28E-05	46
Hepatocellular carcinoma	1.00E00 - 7.82E-05	153
Liver Cirrhosis	3.96E-01 - 1.04E-04	32
Liver Inflammation/Hepatitis	1.00E00 - 2.11E-04	41

Nephrotoxicity

Name	p-value range	# Molecules
Kidney Failure	5.31E-01 - 6.13E-04	25
Renal Damage	1.00E00 - 1.19E-03	33
Renal Inflammation	6.20E-01 - 1.40E-03	38
Renal Nephritis	6.20E-01 - 1.40E-03	38
Renal Tubule Injury	1.00E00 - 1.53E-03	15

Top Regulator Effect Networks

ID	Regulators	Disease & Functions	Consistency Score
1	CREBBP,HYAL1,INS,INSIG1,RORA,TRIM24,TWIST2	Abnormality of left ventricle,Dysfunction of heart (+3 more)	7.924
2	INSIG1,JAK (family),RC3H1,TRIM24	Abnormality of left ventricle (+7 more)	5.8
3	IFNB1,MAPK1,VTN	Remodeling of blood vessel,Systolic pressure	4.243

4	CGAS,HYAL1,IL17F,RASSF1,RYK	Abnormal aortic valve physiology,Cardiomyopathy (+2 more)	4.2
5	BANF1,CHROMR,FGF21,IFNL1,INTERFERON ALPHA (family) (+8 more)	Differentiation of neuronal progenitor cells (+1 more)	4.082

Top Networks

ID	Associated Network Functions	Score
1	Cellular Assembly and Organization, Developmental Disorder, Organismal Injury and Abnormalities	45
2	Carbohydrate Metabolism, Post-Translational Modification, Developmental Disorder	36
3	Developmental Disorder, Hereditary Disorder, Neurological Disease	36
4	Cell Death and Survival, Organismal Injury and Abnormalities, Cellular Assembly and Organization	36
5	Endocrine System Disorders, Gastrointestinal Disease, Metabolic Disease	34

Top Tox Lists

Name	p-value	Overlap
Hepatic Fibrosis	2.67E-05	9.1 % 32/352
VDR/RXR Activation	7.92E-05	15.4 % 12/78
Persistent Renal Ischemia-Reperfusion Injury (Mouse)	1.22E-03	20.0 % 6/30
PXR/RXR Activation	1.48E-03	13.6 % 9/66
Irreversible Glomerulonephritis Biomarker Panel (Rat)	1.52E-03	30.8 % 4/13

Top My Lists

Top My Pathways

Top ML Disease Pathways

Name	p-value	Overlap
Aneurysm	2.85E-05	22.5 % 9/40
Infarction of cerebrum	1.92E-04	20.0 % 8/40
Right ventricular abnormality	3.24E-04	18.6 % 8/43
Ventricular septal defect	4.48E-04	17.8 % 8/45
Heart septal defect	4.48E-04	17.8 % 8/45

Top Analysis-Ready Molecules

Expr Fold Change

Molecules	Expr. Value	Chart
AUTS2	↑ 183.243	
ENOX1	↑ 75.826	
HOOK1	↑ 63.864	
EBF2	↑ 60.560	
LINC00652	↑ 44.607	
ERG	↑ 44.009	
LINC00623	↑ 40.518	
SLC1A3	↑ 39.927	
KCTD8	↑ 35.194	
TNFRSF19	↑ 27.858	

Expr Fold Change

Molecules	Expr. Value	Chart
APBB1IP	↓ -908.510	
TMEM132D	↓ -405.499	
BEX1	↓ -201.322	
PTPRD	↓ -161.523	
COL14A1	↓ -115.697	

ECHDC3	↓ -109.502
SCIN	↓ -94.067
PCDHGB5	↓ -83.891
KRT19	↓ -78.301
SERPINB9	↓ -71.438