

Ingenuity Canonical Pathways	-log(p-value)	Molecules	Key Biological Function
TGF-β Signaling	2,500	INHBA, PMEPA1, SERPINE1	Cell migration, cell differentiation, apoptosis, cell growth, etc.
Integrin Signaling	1,610	ACTN1, BCAR3, ITGB6	Promote intracellular signals in response to the stimulus by the extracellular matrix resulting in modification in cellular shape, mobility, and progression through the cell cycle.
NRF2-mediated Oxidative Stress Response	1,570	FOSL1, GSTA3, GSTM2	It is activated under oxidative stress conditions and subsequently activates several antioxidative genes and proteins.
ERK/MAPK Signaling	1,550	DUSP4, DUSP6, ITGB6	It is a chain of proteins in the cell that communicates a signal from a receptor on the surface of the cell to the DNA in the nucleus of the cell.
Paxillin Signaling	1,380	ACTN1, ITGB6	Focal adhesions and it functions to adhere cells to the extracellular matrix.
TWEAK Signaling	0,983	TNFRSF12A	It is related to TNF and presented apoptotic ability
IL-17A Signaling in Fibroblasts	0,959	CEBPB	Play a central role in the control of infections and chronic inflammatory conditions
ILK Signaling	0,921	ACTN1, ITGB6	Control of cytoskeletal organization and cell motility.
HIF1-alpha Signaling	0,889	ADRA1B, SERPINE1	Master transcriptional regulator of cellular and developmental response to hypoxia
RHO GDI Signaling	0,863	CDH3, ITGB6	Regulates cell migration, adhesion, proliferation and differentiation.
Transcriptional Regulatory Network in Embryonic Stem Cells	0,818	L1CAM	Process that modulate cellular identity and modulates biological activity.
cAMP-mediated signaling	0,804	DUSP4, DUSP6	Signaling cascade used in cell communication.
Wound Healing Signaling Pathway	0,785	CEBPB , LAMC2	Process of tissue regeneration and repair.
Actin Cytoskeleton Signaling	0,777	ACTN1, ITGB6	Mediate cell motility and cell shape changes during the cell cycle and in response to extracellular stimulus
Eicosanoid Signaling	0,742	AKR1C3	Cell signaling, innate response, cell growth, inflammation, etc.
Remodeling of Epithelial Adherens Junctions	0,738	ACTN1	Principle mediators of cell-cell adhesion
Signaling by Rho Family GTPases	0,712	CDH3, ITGB6	Rho proteins play a role in organelle development, cytoskeletal dynamics, cell movement and other common cellular functions.
TREM1 Signaling	0,703	TREM1	Modulate the immune response stimulated by pathogen and cytokine receptors like IL-1R.
Senescence Pathway	0,646	CEBPB, SERPINE1	Process of stable cell cycle arrest that response to various intrinsic and extrinsic stimuli, associated with cellular and molecular changes.
p53 Signaling	0,587	THBS1	Controlling cell division and cell death.
Role of Tissue Factor in Cancer	0,527	PDIA2	Expressed by tumor cells and contribute to tumor growth, metastasis and tumor angiogenesis.
PAK Signaling	0,521	ITGB6	Activation of MAPK signaling in breast cancer
IL-6 Signaling	0,488	CEBPB	Cytokine produced by numerous different cell types and plays a critical role in regulating the acute inflammation and cancer progression.
HGF Signaling	0,480	ITGB6	Produced by stromal and mesenchymal cells, and it stimulates epithelial cell proliferation, motility, morphogenesis and angiogenesis.
IL-12 Signaling and Production in Macrophages	0,472	CEBPB	Promotes Th1 responses and induces IFNγ production by T and NK cells
Protein Kinase A Signaling	0,470	DUSP4, DUSP6	Play a role in many cellular process, such as: proliferation, cell cycle, metabolism, etc.
RAC Signaling	0,465	ITGB6	Control of cell-cell adhesion, cell migration, cell-matrix adhesion, cell cycle, etc.
NAD Signaling Pathway	0,445	CEBPB	involved in cell metabolism

PTEN Signaling	0,433	ITGB6	Promote the activation of signals from growth factor receptors on the cell surface to transcription factors in the nucleus.
HMGB1 Signaling	0,413	SERPINE1	Secreted in the tumor microenvironment leading to cell proliferation, differentiation, mobilization and senescence.
Human Embryonic Stem Cell Pluripotency	0,405	INHBA	
Gαq Signaling	0,401	ADRA1B	Signal transduction in cells leading to RhoA activation, phosphatidylinositol 3-kinase (PI3K) and implications in the regulation of the Akt pathway.
WNT/β-catenin Signaling	0,390	CDH3	Biological processes such as proliferation, apoptosis, differentiation, adhesion, metabolism, gene expression, etc.
IL-17 Signaling	0,374	CEBPB	Pro-inflammatory cytokine involved in control infections.
Leukocyte Extravasation Signaling	0,357	ACTN1	Promote the movement of leukocytes out of the vessels and towards the site of tissue damage or infection.
Regulation of the Epithelial-Mesenchymal Transition Pathway	0,350	FOXC2	Biological process in which a non-motile epithelial cell changes to a mesenchymal phenotype with invasive capacities
PI3K/AKT Signaling	0,343	ITGB6	Intracellular signaling which promotes cell proliferation and apoptosis, angiogenesis and glucose metabolism.
FAK Signaling	0,332	ADRA1B, BCAR3, ITGB6	Plays critical roles in integrin-mediated signal transductions.
HER-2 Signaling in Breast Cancer	0,305	ITGB6	Promote cells in the breast to grow and divide at an uncontrolled rate.
AMPK Signaling	0,279	ADRA1B	Play a role as regulator of cellular energy homeostasis.
Sirtuin Signaling Pathway	0,234	DUSP6	Involved in metabolic regulation.
SAPK/JNK Signaling	0,219	DUSP4	Activated by a variety of environmental stresses, inflammatory cytokines, growth factors which may regulate the activity of multiple transcription factors.
Role of Macrophages, Fibroblasts and Endothelial Cells in Rheumatoid Arthritis	0,206	CEBPB	Secretion of cytokines involved in the regulation of angiogenesis and ECM reorganization.
Glucocorticoid Receptor Signaling	0,000	SERPINE1	Regulation of gene expression
Molecular Mechanisms of Cancer	0,000	ITGB6	Causes by specific DNA damage
CDC42 Signaling	0,000	ITGB6	Involved with Ras-mediated cellular transformation, tumorigenesis, and metastasis.
Phospholipase C Signaling	0,000	ITGB6	Activation of Protein kinase C
TEC Kinase Signaling	0,000	ITGB6	Signal transducers that mediate cell-to-cell communication.
T Cell Receptor Signaling	0,000	DUSP6	Regulation of cytokine production, cell survival, proliferation, and differentiation.