

**Table S7.** Significant pathways identified by the MetaCore analysis based on the differentially expressed genes between *Klf5*-wildtype and *Klf5*-null mouse dorsal prostates. All pathways are ranked based on their *p*-values (from low to high, *p*-value<0.01).

<b>Pathways</b>	<b><i>p</i>-Value</b>	<b>Genes</b>	<b>Number</b>
Protein folding and maturation_Bradykinin / Kallidin maturation	3.55E-07	MMP-8, Carboxypeptidase N (cat), Neprilysin, Tissue kallikreins, KNG, Carboxypeptidase M	6
Protein folding and maturation_Angiotensin system maturation/Rodent version	2.84E-06	AGTR1, Angiotensin MMP-8, Neprilysin,	4
Development_Regulation of epithelial-to-mesenchymal transition (EMT)	5.17E-05	IL-1 beta, HEY1, VE-cadherin, N-cadherin, EGF, PDGF-B, WNT, PDGF-D, Frizzled, Bcl-2, PDGF-R-beta	11
Colorectal cancer (general schema)	1.70E-04	EGF, WNT5A, Leptin receptor, Ephrin-B, WNT, Frizzled, IL8RB	7
Neurophysiological process_Dopamine D2 receptor transactivation of PDGFR in CNS	5.34E-04	PP2A regulatory, PKC, PDGF receptor, G-protein alpha-i family, IP3 receptor, PDGF-R-beta	6
Development_Oligodendrocyte differentiation from adult stem cells	1.03E-03	PLP1, CNTN1 (F3), Myelin basic protein, FGFR3, EDNRB, PDGF-B, TAT1, BMPR1B	8
Glutathione metabolism	1.14E-03	GSTM2, GPX3, GSTM5, GPX2, MGST, GSTT1, GSTA3, GGT1, GSTO1	9
Cell adhesion_ECM	1.18E-03	MMP-12, ErbB4, MMP-13,	8

remodeling		Collagen IV, Syndecan-2, Collagen I, TIMP1, Collagen III	
Development_Transcription factors in segregation of hepatocytic lineage	1.20E-03	Keratin 7, OC-2, Albumin, Alpha 1-antitrypsin, A2M, HHEX (PRH)	6
Role of platelets in allograft rejection	1.69E-03	IL-1 beta, CD40(TNFRSF5), Tissue factor, P-selectin, Collagen I, SLC21A2, Collagen III	7
Muscle contraction_Regulation of eNOS activity in cardiomyocytes	1.92E-03	Phospholamban, PDE2A, Adenylate cyclase type V, PDE3A, Troponin T, cardiac, ACM2, G-protein alpha-i family, IP3 receptor	8
Cell adhesion_Endothelial cell contacts by non-junctional mechanisms	2.56E-03	N-cadherin, Collagen IV, ESAM, Alpha-catenin, Collagen I	5
Cytoskeleton remodeling_Role of PDGFs in cell migration	2.56E-03	PDGF-B, PDGF receptor, PDGF-D, VAV-2, PDGF-R-beta	5
Transport_Alpha-2 adrenergic receptor regulation of ion channels	2.87E-03	PKC-zeta, Adenylate cyclase type V, Alpha-2A adrenergic receptor, G-protein alpha-i family, IP3 receptor	5
Development_Lipoxin inhibitory action on PDGF, EGF and LTD4 signaling	3.19E-03	EGF, SOCS2, PDGF-B, G-protein alpha-i family, Adenylate cyclase, PDGF-R-beta	6
Development_Thromboxane A2 pathway signaling	3.65E-03	EGF, MSK1/2 (RPS6KA5/4), PKC, Tcf(Lef), G-protein alpha-i family, Adenylate cyclase, IP3 receptor	7

G-protein signaling_H-RAS regulation pathway	3.68E-03	TIE2, RASGRF1, PDGF-B, CalDAG-GEFIII, RET, PDGF-R-beta	6
Development_Retinoic acid and retinoic acid receptors in regulation of oligodendrocyte differentiation	3.68E-03	PLP1, UGT8, Myelin basic protein, DHA2, PGAR, Transthyretin	6
Development_Neural stem cell lineage commitment (schema)	4.22E-03	PLP1, CNTN1 (F3), Myelin basic protein, MCT1 (SLC16A1), NeuN, MAP2	6
Signal transduction_cAMP signaling	4.22E-03	KDELRL, PKC-zeta, Phospholamban, Adenylate cyclase type V, PKC, G-protein alpha-i family	6
Signal transduction_PKA signaling	4.59E-03	KDELRL, PP2A regulatory, DARPP-32, AKAP12, PDE3A, G-protein alpha-i family, Adenylate cyclase	7
Some pathways of EMT in cancer cells	4.59E-03	4E-BP1, EGF, PDGF-B, PDGF receptor, PDGF-D, Bcl-2, PDGF-R-beta	7
Development_BMP7 in brown adipocyte differentiation	4.82E-03	PERC, Angiotensinogen, BMP7, PPAR-gamma, SERPINA3 (ACT), Necdin	6
Blood coagulation_Blood coagulation	4.82E-03	Tissue factor, Alpha 1-antitrypsin, A2M, Protein C, Bradykinin, KNG	6
CFTR-dependent regulation of ion channels in CF	6.20E-03	KCNQ1, beta-ENaC, SK4/IK1, alpha-ENaC, IP3 receptor, CLCA2	6
Breast cancer (general	6.20E-03	EGF, ErbB4, Jagged2, Leptin	6

schema)		receptor, GHR, Prolactin receptor	
Muscle contraction_GPCRs in the regulation of smooth muscle tone	6.88E-03	AGTR1, Adenosine A2b receptor, Angiotensin II, MyHC, ACM2, G-protein alpha-i family, Adenylate cyclase, IP3 receptor, ACM3	9
Airway smooth muscle contraction in asthma	7.72E-03	Phospholamban, MyHC, G-protein alpha-i family, Adenylate cyclase, Bradykinin, IP3 receptor, ACM3	7
Impaired Lipoxin A4 signaling in CF	8.78E-03	EGF, SOCS2, PDGF-B, G-protein alpha-i family, Adenylate cyclase, PDGF-R-beta	6
Development_Role of G-CSF in hematopoietic stem cell mobilization	9.70E-03	G-CSF receptor, C5a, Cathepsin K, Carboxypeptidase M	4
Multiple sclerosis (general schema)	9.70E-03	WNT5A, VCAM1, Apo-2L(TNFSF10), Transthyretin	4
G-protein signaling_Regulation of cAMP levels by ACM	9.79E-03	Adenylate cyclase type V, ACM2, G-protein alpha-i family, IP3 receptor, ACM3	5

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