

Genes	Angiogenesis	Cancer Metabolism	ECM Layers	ECM Remodeling	EMT	Hypoxia	Metastasis	Transcription Factor	Tumor Growth	Tumor Invasion	Internal Reference Genes
AAMP	+		+								
ABI3BP			+								
ACHE			+								
ACTG2							+				
ACVR1			+								
ACVR1C			+								
ACVRL1	+										
ADAM15	+		+	+	+						
ADAM17			+	+		+					
ADAM28			+	+							
ADAM8	+		+	+							
ADAM9			+	+							
ADAMTS1			+	+							
ADAMTS12			+	+							
ADAMTS8			+	+							
ADAP1			+		+						
ADD1	+		+					+			
ADM2	+										
ADRA2B	+		+								
AEBP1			+					+			
AGGF1	+										
AGR2					+						
AGRN			+	+							
AGT	+		+								
AHNAK					+						
AKAP12			+		+		+				
AKAP2					+						
AKT1	+	+	+		+						
AKT2	+	+	+			+					
AKT3	+	+	+		+	+					
ALB	+		+								
ALDOA	+	+				+					
ALOX5					+						
AMH								+			
ANG	+		+			+					
ANGPT1	+					+					
ANGPT2	+		+			+					
ANGPTL2					+						
ANGPTL4	+					+					
ANPEP	+		+								
ANXA2P2	+		+								
AP1M2					+						
APC											
APOD	+										
APOE			+								
APOH	+		+								
AQP1	+		+								
ARAP2					+						
AREG			+		+						
ARHGAP32			+		+						
ARHGDI8					+		+				
ASPN			+		+						
ATPIF1	+										
B3GNT3			+		+						
BAD	+										
BAG2					+						
BAI1	+		+								
BAI3	+		+								
BCAS1					+						
BGN			+		+						
BICC1					+						
BMP4	+										
BMP5											
BMP7	+		+		+			+			
BMPER	+										
BMPR1A			+								
BMPR1B			+								
BMPR2			+								
BNC2			+		+						
BRMS1							+	+			
BTG1	+										
C1S					+						
C3	+										
C3AR1	+		+								
CADM1			+				+				
CALCRL	+		+								
CALD1			+		+						
CAMK2A			+					+			
CAMK2B			+			+					
CAMK2D			+			+					
CAMP	+										
CASP8	+			+			+				
CAV1	+		+		+	+					
CBLC					+						
CCBE1	+		+								
CCDC80			+								
CCL11	+		+								
CCL21			+								
CCL5											
CCL7				+							
CCL8					+						
CCR2	+		+								
CCR3	+		+								
CD163			+		+						
CD24			+		+	+					
CD2AP			+		+						
CD34			+								
CD36	+		+	+				+			
CD44			+	+			+	+			
CD46			+		+						
CD82			+				+				
CDC42	+		+								
CDH1			+	+	+		+				
CDH11			+		+		+				
CDH13	+		+		+						
CDH2			+		+						
CDK14			+		+						
CDKN1A						+					



EPCAM			+		+				+		
EPHA1	+		+		+				+		+
EPHA2	+		+		+				+		+
EPHB1	+		+		+				+		+
EPHB3	+		+		+				+		+
EPHB4	+		+		+				+		+
EPN3					+						
EPS8L1					+						
ERBB2	+	+	+		+	+			+		
ERBB2IP			+		+				+		+
ERBB3			+		+				+		+
EREG	+		+		+				+		
ERMP1			+		+				+		
ESRP1			+		+				+		
ETV4								+	+		
EVI2A			+		+						
EVPL					+						
F11R	+		+		+						+
F3	+		+		+				+		
FAM174B			+		+						
FAP	+		+		+				+		
FASLG	+		+		+						
FBLN1			+		+						
FBLN5	+		+		+						+
FBN1			+		+						
FBN2			+		+						
FBP1					+				+		
FERMT2					+						+
FGF18	+								+		
FGF2	+			+					+		
FGF9	+		+						+		
FGFR1	+	+							+		
FGFR2	+	+	+						+		
FGFR3		+	+		+				+		+
FGFR4			+						+		
FGL2					+						
FHL1			+		+				+		
FIGF	+							+	+		
FLI1					+			+			
FLT1	+		+						+		+
FLT4	+		+		+				+		
FMOD			+		+				+		+
FN1	+		+	+	+						+
FOXC2	+				+			+	+		+
FOXO4	+							+	+		+
FRAS1			+								+
FREM1			+								+
FREM2			+								+
FST									+		
FSTL1					+						
FUT3			+		+						
FXYD6			+		+						
GALNT7			+		+						
GATA4	+							+	+		
GDF15					+				+		
GDF5									+		
GDF6									+		
GIMAP4					+						
GIMAP6					+						
GJA5	+		+								+
GLYR1					+						
GPI	+		+		+				+		
GPR124	+		+		+						+
GPR56	+		+		+						+
GPX1	+								+		
GREM1	+		+		+			+	+		
GRHL2					+			+			
GSN								+			+
GTF2I	+							+			
GZMK					+						
HAPLN1			+								+
HAS1			+								+
HDACS	+							+			
HDHD3					+						
HEG1	+		+		+						+
HGF	+		+		+				+		+
HIF1A	+	+	+	+	+			+	+		
HIPK1	+								+		
HIPK2	+								+		
HK2		+							+		
HK3		+							+		
HKDC1		+							+		
HLA-DPB1			+					+			
HMOX1	+								+		+
HOXA5	+							+	+		
HOXA7	+							+			
HOXB13	+							+			
HOXB3	+							+			
HPSE	+								+		+
HRAS	+	+	+						+		
HSD17B12			+								
HSP90B1			+								+
HSPB1	+		+								+
HSPG2	+		+	+							
HUNK								+			
IBSP				+					+		+
ICAM1			+					+			+
ID1	+		+					+	+		+
ID2								+	+		
ID4								+	+		
IFNG	+		+						+		
IGF1	+				+	+			+		
IGFBP4					+				+		
IGFBP7			+						+		+
IL10RA			+		+						
IL11									+		
IL13RA2	+		+								
IL15			+						+		
IL18	+		+						+		+

IL1A	+					+			+		
IL1B	+					+			+		+
IL1RL1				+							
IL1RN				+		+					+
IL6	+			+		+			+		+
ILK				+		+			+		+
INHBA									+		
INHBE									+		
IRF6						+		+	+		
ISL1	+							+	+		
ISLR						+					+
ITGA1				+		+					+
ITGA11				+		+					+
ITGA2				+		+					+
ITGA3	+			+		+					+
ITGA5	+			+		+			+		+
ITGA6	+			+		+			+		+
ITGA7				+		+					+
ITGA8				+		+			+		+
ITGA9				+		+					+
ITGAM	+			+							+
ITGB1	+			+		+			+		+
ITGB1BP1	+										
ITGB2	+			+							+
ITGB3	+			+		+			+		+
ITGB4				+		+					+
ITGB6				+		+					+
ITGB7				+		+					+
ITGB8	+			+		+					+
ITM2A				+		+					
JAG1	+			+		+			+		+
JAM2	+			+		+					+
JAM3	+					+					+
JUN	+	+						+	+		+
KCNJ8				+		+					
KDM1A	+						+	+			
KDR	+			+					+		
KIAA1462						+					
KISS1							+		+		
KLK3	+										+
KRAS	+	+		+					+		
KRIT1	+								+		
KRT1	+			+							
KRT14						+					+
KRT19						+					
KRT7						+					
LAD1				+		+					
LAMA1				+		+					+
LAMA3				+		+					+
LAMA4	+			+		+					+
LAMA5	+			+		+			+		+
LAMB3				+		+					+
LAMC1				+		+			+		+
LAMC2						+					+
LDHA								+			
LEFTY1									+		
LGALS1				+		+					
LHFP				+		+					
LIFR				+				+			
LLGL2						+			+		
LOX	+			+		+					
LOXL2	+			+		+					+
LRG1	+										
LTBP4				+					+		+
LUM				+					+		
LY96				+		+					
MAF						+			+		
MAP2K1	+	+		+		+			+		+
MAP2K2	+	+				+			+		+
MAP2K4							+				
MAP3K7	+			+							
MAPK1	+	+		+		+			+		+
MAPK3	+	+				+			+		+
MAPKAPK3	+										
MCAM	+			+							+
MED1	+										+
MED23							+	+			
MEG3	+								+		+
MEOX2	+					+		+			
MET		+		+					+		
MFAP4				+		+					+
MGAT5				+							+
MGP				+							
MISP						+					
MMP1	+			+		+					+
MMP10				+		+					
MMP12						+			+		
MMP13				+		+					+
MMP14	+			+		+			+		+
MMP17				+		+					
MMP2	+			+		+					+
MMP24				+		+					+
MMP3				+		+					+
MMP9				+		+			+		
MMRN2	+			+							
MPDZ				+		+					
MRC1				+		+					
MS4A4A				+		+					
MS4A6A				+		+					
MT3	+								+		
MTA1						+		+			
MTBP								+			
MTDH	+			+				+			
MTOR		+				+			+		
MUC1				+		+			+		
MYC		+							+		
MYCL									+		
MYH11											+
MYLK						+			+		

MYO1D					+							
MYO5C					+							
NAA15	+							+				
NAP1L3					+							
NCAM1			+								+	
NCL	+											
NDNF			+							+		
NDP	+		+					+		+		
NDRG1			+				+	+				
NF1	+						+			+	+	
NF2			+							+	+	
NFAT5	+							+				
NFATC2	+		+					+		+		
NFKB1							+			+		
NID2			+								+	
NME1								+				
NME4								+				
NODAL	+				+					+	+	
NOS2	+						+			+		
NOS3	+		+				+			+		
NOTCH1	+		+		+						+	
NOX5	+	+	+							+		
NPR1	+		+							+		
NR3C1	+				+					+		
NR4A1	+							+		+		
NR4A3										+		
NRCAM	+		+								+	
NRP1	+		+							+	+	
NRP2	+		+							+	+	
NRXN1	+		+							+	+	
NRXN3	+		+							+	+	
NTRK1	+	+	+							+	+	
OAS1					+							
OCLN			+		+							
OGN			+							+		
OLFM2B			+		+							
OVOL2	+				+					+		
P3H1					+							
P3H2			+								+	
PCOLCE			+		+							
PDCD10	+		+							+	+	
PDCL3	+										+	
PDGFA	+	+	+	+		+				+	+	
PDGFC	+	+	+		+					+	+	
PDGFRB		+	+							+	+	
PDK1		+				+						
PDPN			+							+	+	
PEBP4								+				
PECAM1	+		+								+	
PFKFB1						+						
PFKFB4						+						
PGK1		+				+						
PIK3CA	+	+				+				+		
PIK3CD	+	+	+			+						
PIK3CG	+	+	+			+				+	+	
PIK3R1	+	+	+			+					+	
PIK3R2	+	+				+				+		
PIK3R5	+	+				+						
PIK3R6	+											
PITX2								+		+		
PKM		+	+								+	
PKN1			+		+					+	+	
PKNOX1	+							+				
PLA2G10	+							+				
PLA2G2A	+											
PLA2G2D	+											
PLA2G3	+		+									
PLAU	+		+	+		+				+	+	
PLAUR	+		+							+		
PLCG1	+	+	+			+				+		
PLCG2	+		+			+						
PLEKHO1			+			+						
PLS1						+						
PLXDC1	+		+									
PLXNC1			+			+					+	
PLXND1	+		+									
PMP22			+			+				+		
PNPLA6	+		+									
POPDC3			+			+						
POSTN			+								+	
PPFIBP2						+						
PPL			+			+						
PPP1R16B	+		+									
PPP2CB										+		
PPP2R1A										+		
PPP3R1	+					+						
PRELP			+								+	
PRF1			+			+		+				
PRKCB	+	+	+				+			+	+	
PRKCG	+	+	+				+			+	+	
PRKCZ			+			+						
PROK2	+									+	+	
PROM1			+			+		+				
PRR15L						+						
PRSS22					+							
PRSS8			+	+	+							
PTEN	+	+	+							+		
PTGDS						+						
PTGIS	+		+			+						
PTGS2	+									+	+	
PTK2	+			+	+						+	
PTK2B	+						+			+	+	
PTK6			+			+						
PTPRB	+		+								+	
PTPRC			+			+				+	+	
PTPRM	+		+							+	+	
PTRF			+			+						
PTTG1								+		+		
PTX3					+							

PXDN			+							
PYCARD										
QKI	+		+					+		
RAB25			+						+	
RAC1	+	+	+							+
RAC2	+	+	+						+	+
RAF1	+	+	+						+	
RAMP1	+		+							
RAMP2	+		+							
RB1										
RBL1										
RBL2										
RBM47										
RBPJ	+									
RBX1										
RELN										
RGCC	+									
RHOA										
RNH1	+									
ROBO4	+									
ROCK1	+									
ROCK2	+									
RORA	+									
RORB										
RPS27A										
RPS6KB1										
RPS6KB2										
RRAS	+									
RTN4	+									
RUNX1	+									
RUNX1T1										
S100A14										
S100A7	+									
S1PR1	+									
SACS										
SAMSN1										
SCG2	+									
SCNN1A										
SDC4										
SELE										
SEMA3E	+									
SERINC5										
SERPINA1	+									
SERPINE1	+									
SERPINF1	+									
SERPING1	+									
SERPINH1										
SET										
SETD2	+									
SFRP1	+									
SFRP2	+									
SH2B3	+									
SH2D3A										
SH3YL1										
SHB	+									
SIRT1	+									
SKP1										
SLC12A6	+									
SLC2A1										
SLC35A3										
SLC37A1										
SLC44A4										
SLIT2	+									
SLPI										
SMAD1										
SMAD2										
SMAD3										
SMAD4										
SMAD5										
SMAD9										
SMC3										
SMOC1										
SMURF1										
SMURF2										
SNAI1	+									
SNAI2										
SNAI3										
SNRPF										
SOD1	+									
SORD										
SOX17	+									
SOX2										
SOX9										
SP1										
SPARC	+									
SPARCL1										
SPDEF										
SPHK2	+									
SPINK5	+									
SPINT1	+									
SPOCK3										
SPP1										
SRC	+									
SRF	+									
SRGN	+									
SRPK2	+									
SRPX2	+									
SSTR2										
ST14										
STAB1	+									
STAB2	+									
STAT1	+									
STAT3										
SULF1	+									
SV2B										
SYK	+									
SYNE1										
TACSTD2										
TAL1	+									



