SupplementaryTable S1. Sequence of primers used for real-time polymerase chain reaction.

Gene name	Sequence
18S FORWARD	ACC AGA GCG AAA GCA TTT GCC A
18S REVERSE	TCG GCA TCG TTT ATG GTC GGA A
IFI1 FORWARD	CAA CCA CAG TTC AGC CAA ATC
IFI1 REVERSE	CTG CCA AAC TTG TGT CTG ATT C
IFI6 FORWARD	GGT GGA GGC AGG TAA GAA A
IFI6 REVERSE	ACG GCC ATG AAG GTC AG
IFI44 FORWARD	GGG CAC TAA TAC AAC TGG GAT A
IFI44 REVERSE	CCC AGT GAG TCA CAC AGA ATA A
IFI44L FORWARD	AAG CCA GAG AGC ACA GAA ATA G
IFI44L REVERSE	GGA CTT TCC AGA CCC AAC TG
IRF8 FORWARD	TGG ACA TTT CCG AGC CAT AC
IRF8 REVERSE	CGC ACT CCA TCT CTG TAA CTT C
IFIT1 FORWARD	CAC CAT TGG CTG CTG TTT AG
IFIT1 REVERSE	CTC CTC TGA GAT CTG GCT ATT C
IFIT3 FORWARD	CCC TGC CAA GGG TCA TAA AT
IFIT3 REVERSE	TGC CTG AAG CTA TAA GTG AGA TAA G
OAS1 FORWARD	CAG ACG ATG AGA CCG ACG AT
OAS1 REVERSE	TGG AGT GTG CTG GGT CTA TG
OAS2 FORWARD	TGG TTA TCC TCT CCC TGC TTC
OAS2 REVERSE	GTC TGC ATT GTC GGC ACT TTC
OAS3 FORWARD	GGC ACG TTA AGA GAC CCA GG
OAS3 REVERSE	CAT GCA AAT CCC AGT GCC AG
OASL FORWARD	GAA CGT GAA GAG GGC ACG A
OASL REVERSE	GGG CTC ATA AGG GTT CAC GAT
MX1 FORWARD	CGA AGT TTC TGC GTA TGT GGG T
MX1 REVERSE	CTT AGT CAT CTC AGG AAG GGG A
MX2 FORWARD	TGA ACG TGC AGC GAG CTT
MX2 REVERSE	GGG CCT TAG ACA TGT GCT GT

SupplementaryTable S2. Complete list of upregulated genes in SSc-ILD lung CD31+/CD102+MVAC compared with normal lung MVEC.

genesymbol	genedescription	FC (abs) ([2_ECS]	Log FC ([2_ECS] V	p ([2_ECS] Vs [1_ECI
CADM3	celladhesionmolecule3	11.176229	3.4823616	0.001528176
CADM3-AS1	CADM3antisenseRNA1	8.677735	3.1173186	0.003263166
MX1	MXdynamin-likeGTPase1	6.28094	2.6509805	0.033745214
IFI6	interferon,alpha-inducibleprotein6	6.227719	2.6387038	0.018742865
ACKR1	atypicalchemokinereceptor1(Duffybloodgroup)	6.0497565	2.596877	8.11E-04
MX2	MXdynamin-likeGTPase2	5.761915	2.5265484	0.011884498
OAS2	2-5-oligoadenylatesynthetase2	5.477822	2.4536023	0.028242487
OAS1	2-5-oligoadenylatesynthetase1	5.4039187	2.434006	0.02620641
BST2	bonemarrowstromalcellantigen2	5.1536818	2.3656034	0.035561442
IFIT1	interferon-inducedproteinwithtetratricopeptiderepeats1	4.5181155	2.1757212	0.046732422
IFITM1|IFITM2	interferoninducedtransmembraneprotein1|interferoninducedtransm	4.4976134	2.1691597	0.033290304
IFI44L	interferon-inducedprotein44-like	4.363266	2.1254084	0.03673953
CEMIP	cellmigrationinducingprotein,hyaluronanbinding	4.363187	2.1253822	0.033983957
IGSF10	immunoglobulinsuperfamily,member10	4.289742	2.1008909	0.025124958
RSAD2	radicalS-adenosylmethioninedomaincontaining2	4.2432723	2.0851772	0.023765212
ISG15	interferon stimulated gene 15	4.182464	2.0643532	0.006634828
INMT|FAM188B|I	indolethylamineN-methyltransferase|familywithsequencesimilarity18	3.8203368	1.9336998	0.028674193
CTHRC1	collagentriplehelixrepeatcontaining1	3.6821492	1.880548	0.010655031
CCNA1	cyclinA1	3.6583948	1.8712108	0.004924383
HERC6	HECTandRLDdomaincontainingE3ubiquitinproteinligasefamilymembe	3.5998871	1.8479517	0.016100045
SNORA23	smallnucleolarRNA,H/ACAbox23	3.5207393	1.8158784	0.005219352
OASL	2-5-oligoadenylatesynthetase-like	3.4854586	1.8013484	0.009010103
HTR2B	5-hydroxytryptamine(serotonin)receptor2B,Gprotein-coupled	3.4681609	1.7941707	0.002627691
C12orf60	chromosome12openreadingframe60	3.4509616	1.7869984	0.001592788
RARRES2	retinoicacidreceptorresponder(tazaroteneinduced)2	3.445747	1.7848167	0.005500027
CHI3L1	chitinase3-like1(cartilageglycoprotein-39)	3.425645	1.7763757	0.029614024
LUM	lumican	3.3627822	1.7496554	0.009448166
MGP	matrixGlaprotein	3.2748518	1.7114296	9.66E-04
COL3A1|MIR3606	collagen,typeIII,alpha1|microRNA3606	3.2657492	1.707414	0.038734056
IFI44	interferon-inducedprotein44	3.2379625	1.6950862	0.046946183
CENPW	centromereproteinW	3.153179	1.6568071	3.34E-04
COL1A1	collagen,typeI,alpha1	3.0772052	1.6216207	0.022042787
ENPP2	ectonucleotidepyrophosphatase/phosphodiesterase2	2.9969363	1.5834885	0.001212123
EPSTI1	epithelialstromalinteraction1(breast)	2.8992147	1.5356622	0.009971135
HLA-F	majorhistocompatibilitycomplex,classI,F	2.689418	1.427294	0.005828249
PDGFD	plateletderivedgrowthfactorD	2.5975165	1.3771329	0.008657583
DMKN	dermokine	2.5458186	1.3481296	0.022836484
SNCA	synucleinalpha	2.5147586	1.3304199	2.35E-04
FAP	fibroblastactivationproteinalpha	2.5052452	1.3249518	0.046623465
SCG5	secretograninV	2.4637156	1.3008357	0.02220759
GCNT4	glucosaminyl(N-acetyl)transferase4,core2	2.4603078	1.2988389	0.027318414
CCDC144B	coiled-coildomaincontaining144B(pseudogene)	2.4565892	1.2966566	0.045620482
CD248	CD248 molecule	2.4557445	1.2961605	0.04912435
AEBP1|MIR4649	AEbindingprotein1|microRNA4649	2.4554794	1.2960047	0.024134671
HSPA2	heatshock70kDaprotein2	2.380553	1.2512968	0.014012535
MYOZ2	myozenin2	2.378842	1.2502595	0.007842631
TNFRSF21	tumornecrosisfactorreceptorsuperfamily,member21	2.3226864	1.2157944	0.005649495
ERV3-1|ZNF117	endogenousretrovirusgroup3,member1|zincfingerprotein117	2.3108351	1.2084143	0.040944267
CFH	complementfactorH	2.29909	1.2010629	0.012739767
SPRY1	sproutyRTKsignalingantagonist1	2.2772632	1.187301	0.030607782
CA8	carbonicanhydraseVIII	2.1719787	1.11901	0.014979054
PSMB8-AS1|PSMB	PSMB8antisenseRNA1(headtohead)|proteasomesubunitbeta9	2.1606293	1.1114515	0.018836109
CCDC102B	coiled-coildomaincontaining102B	2.1316776	1.0919893	0.00601216
GRAMD3	GRAMdomaincontaining3	2.1314988	1.0918683	0.001846449
USP18	ubiquitinspecificpeptidase18	2.1170843	1.0820787	0.021908265
RNU5F-1	RNA,U5Fsmallnuclear1	2.1037018	1.0729302	0.006981405
HLA-L	majorhistocompatibilitycomplex,classI,L(pseudogene)	2.0294855	1.021114	0.04202845
FAM198B	familywithsequencesimilarity198,memberB	2.0120609	1.0086739	0.048657842
SNORA14A	smallnucleolarRNA,H/ACAbox14A	2.006614	1.0047631	0.023673793
PSG4	pregnancyspecificbeta-1-glycoprotein4	2.0016613	1.0011978	0.041948933

SupplementaryTable S3. Complete list of downregulated genes in SSc-ILD CD31+/CD102+ lung MVEC compared with normal lung MVEC

genesymbol	genedescription	FC (abs) ([2_ECS] Vs	Log FC ([2_ECS] Vs [1	p ([2_ECS] Vs [1_ECN
TIMP3	TIMPmetallopeptidaseinhibitor3	3.023423	-1.5961828	0.02108135
KCNMA1	potassiumchannel,calciumactivatedlargeconductancesubfamilyMalpha,me	3.020649	-1.5948585	0.003076818
TNFRSF10D	tumornecrosisfactorreceptorsuperfamily,member10d,decoywithtruncated	2.9549828	-1.5631497	0.005541723
INPP4B	inositolpolyphosphate-4-phosphatasetypeIIB	2.6730585	-1.4184914	9.16E-04
GPR1	Gprotein-coupledreceptor1	2.6661034	-1.4147327	0.015590683
FOXF2	forkheadboxF2	2.6099143	-1.3840024	0.032518797
IGFBP3	insulinlikegrowthfactorbindingprotein3	2.6019888	-1.3796147	0.001695267
SGCG	sarcoglycangamma	2.5597363	-1.3559952	0.002081413
SPX	spexinhormone	2.553893	-1.3526981	6.32E-04
SPRY2	sproutyRTKsignalingantagonist2	2.469481	-1.3042078	0.022439549
FOXD1	forkheadboxD1	2.4342265	-1.2834634	0.004464717
RPL37	ribosomalproteinL37	2.3838477	-1.2532921	0.03388458
MET	MET proto-oncogene, receptor tyrosine kinase	2.3828015	-1.2526587	0.004728771
PVR	poliovirusreceptor	2.376516	-1.2488482	0.012199174
ABHD2	abhydrolasedomaincontaining2	2.371065	-1.2455351	0.040024363
IFNAR1	interferon(alpha,betaandomega)receptor1	2.317646	-1.2126602	0.01882189
MAST4	microtubuleassociatedserine/threoninekinasefamilymember4	2.309258	-1.2074293	0.04607899
LRIF1	liganddependentnuclearreceptorinteractingfactor1	2.2900774	-1.1953964	0.001593886
PREPL	prolylendopeptidase-like	2.28278	-1.1907917	0.023693662
HSPA4L	heatshock70kDaprotein4-like	2.2631938	-1.1783601	0.020165348
FAM216A	familywithsequencesimilarity216,memberA	2.2596183	-1.176079	0.012888489
PEG10	paternallyexpressed10	2.2482884	-1.168827	0.004283044
SLC9B2	solutecarrierfamily9,subfamilyB(NHA2,cationprotonantiporter2),member2	2.2454033	-1.1669745	0.027601942
TMEM47	transmembraneprotein47	2.2293634	-1.1566318	0.018819822
TGFBR3	transforminggrowthfactorbetareceptorIII	2.2187552	-1.1497505	0.031336535
NBPF12	neuroblastomabreakpointfamily,member12	2.1888568	-1.1301776	0.021422714
RPLP0	ribosomalprotein,large,P0	2.1832464	-1.126475	0.01756942
FITM2	fatstorage-inducingtransmembraneprotein2	2.1807232	-1.1248066	0.019127386
ACO2	aconitase2,mitochondrial	2.1773171	-1.1225516	0.048349503
MAP1LC3B	microtubule-associatedprotein1lightchain3beta	2.1711874	-1.1184843	0.039584506
RRM2B	ribonucleotidereductaseM2B(TP53inducible)	2.1463575	-1.1018904	0.036316358
ADGRG6	adhesionGprotein-coupledreceptorG6	2.1350718	-1.0942845	0.004059004
ANK2	ankyrin2,neuronal	2.1348228	-1.0941163	1.42E-04
AKR1B1	aldo-ketoreductasefamily1,memberB1(aldosereductase)	2.1336012	-1.0932906	0.010644471
OGN	osteoglycin	2.1260777	-1.0881943	0.008621363
SNRPN|IPW	smallnuclearribonucleoproteinpolypeptideN|imprintedinPrader-Willisyndr	2.1255949	-1.0878667	2.80E-04
MIR3654|EEF1G	microRNA3654|eukaryotictranslationelongationfactor1gamma	2.1250703	-1.0875106	0.028811099
ODC1	ornithinedecarboxylase1	2.124765	-1.0873032	0.022040764
GABPB1-AS1	GABPB1antisenseRNA1	2.1187205	-1.0831933	0.038419902
KPNB1	karyopherin(importin)beta1	2.1142285	-1.0801313	0.038498208
ZNF844	zincfingerprotein844	2.1095152	-1.0769114	0.001505718
PECR	peroxisomaltrans-2-enoyl-CoAreductase	2.1067948	-1.0750498	0.026357826
MARS	methionyl-tRNAsynthetase	2.102256	-1.0719384	0.049695507
TOB2	transducerofERBB2,2	2.100481	-1.0707197	0.015135538
EEF2	eukaryotictranslationelongationfactor2	2.0983517	-1.0692565	0.041053064
PWAR5|SNORD1	PraderWilli/AngelmanregionRNA5|smallnucleolarRNA,C/Dbox108	2.0943754	-1.06652	0.029491253
TSLP	thymicstromallymphopoietin	2.0883694	-1.0623769	0.04887663
PLAGL2	pleiomorphicadenomagene-like2	2.0729845	-1.0517093	0.023884812
SNRPN|IPW	smallnuclearribonucleoproteinpolypeptideN|imprintedinPrader-Willisyndr	2.0705526	-1.0500158	0.017534908
ABL2	ABLproto-oncogene2,non-receptortyrosinekinase	2.0565498	-1.040226	0.045568034
GEM	GTPbindingproteinoverexpressedinskeletalmuscle	2.0506718	-1.0360966	0.046210025
CHI3L2|DENND2I	chitinase3-like2|DENN/MADDdomaincontaining2D	2.050445	-1.0359371	0.011433018
NTN4	netrin4	2.0489442	-1.0348808	0.036580607
RPL23AP7	ribosomalproteinL23apseudogene7	2.046109	-1.0328829	0.014375987
SNRPN|IPW	smallnuclearribonucleoproteinpolypeptideN|imprintedinPrader-Willisyndr	2.0449338	-1.0320541	0.007487165
NDC1	NCD1 transmembrane nucleoporin	2.0408974	-1.0292037	0.003129534
SNRPN|IPW	smallnuclearribonucleoproteinpolypeptideN|imprintedinPrader-Willisyndr	2.0387511	-1.0276856	0.007832754
PDE12	phosphodiesterase12	2.0318584	-1.0227998	0.013187402
MTO1	mitochondrialtRNAtranslationoptimization1	2.0302598	-1.0216644	0.040323094
SNHG19	smallnucleolarRNAhostgene19	2.0213358	-1.015309	0.005664039
NUDT6	nudixhydrolase6	2.020941	-1.0150272	0.020987859
LINC00294|TCP1	longintergenicnon-proteincodingRNA294|t-complex11,testis-specific-like1	2.0203576	-1.0146106	0.004137625
DAXX	death-domainassociatedprotein	2.014684	-1.0105535	0.022459833
CDH11	cadherin11,type2,OB-cadherin(osteoblast)	2.00872	-1.0062764	0.03849785
CCL20	chemokine(C-Cmotif)ligand20	2.0041482	-1.0029892	0.0358533
SDC2	syndecan2	2.0012677	-1.0009141	0.020132422
PPP3CA	proteinphosphatase3,catalyticsubunit,alphaisozyme	2.0011122	-1.000802	0.04862569