

	RNA-sequencing cohort					RT-qPCR validation		FACS cohort	
	HC (12)	eaSSc (12)	ncSSc (12)	lcSSc (12)	dcSSc (12)	HC (7)	dcSSc (6)	HC (11)	dcSSc (12)
Age (years)	53 (49-66)	60 (42-77)	53 (49-60)	61 (52-65)	53 (48-58)	46 (38-51)	45 (37-55)	44 (35-54)	56 (50-64)
Female, n (%)	10 (83)	10 (83)	12 (100)	12 (100)	7 (58)	7 (100)	6 (100)	3 (25)	3 (23)
ANA, n pos (%)	-	10 (83)	10 (83)	11 (92)	11 (92)	-	5 (83)	-	12 (100)
ACA, n pos (%)	-	7 (58)	7 (58)	10 (83)	2 (17)	-	0 (0)	-	1 (8)
Sci70, n pos (%)	-	1 (8)	1 (8)	3 (25)	3 (25)	-	4 (67)	-	5 (42)
mRSS	-	-	-	4 (3-6)	17 (10-22)	-	10 (7-11)	-	12 (10-13)
Disease duration	-	-	5 (2-7)	20 (11-30)	7 (2-12)	-	10 (2-15)	-	5 (2-6)

Supplementary Table 1. Clinical characteristics of subjects enrolled in the study. Reported values indicate the number (n) of individuals, with the (%) for each parameter. For age, mRSS and disease duration (in years), the median with interquartile range is given. ANA, anti-nuclear antibodies; ACA, anticentromere antibodies; Sci70, anti-topoisomerase antibodies; mRSS, modified Rodnan skin score; HC, healthy controls; eaSSc, early SSc; ncSSc, non-cutaneous SSc; lcSSc, limited cutaneous SSc; dcSSc, diffuse cutaneous SSc; pos, positivity.

Gene	Forward	Reverse
GUSB	CACCAGGGACCATCCAATACC	GCAGTCCAGCGTAGTTGAAAAA
NR4A1	ACTGCCCTGTGGACAAGAG	CTGTTCCGACAACCTTCCTTC
NR4A2	GGACTCCCCATTGCTTTTC	AGGCGAGGACCCATACTG
NR4A3	CTGCCCAGTAGACAAGAGAC	CTCCTCCCTTTCAGACTATC
IL-6	GGCACTGGCAGAAAACAACC	GCAAGTCTCCTCATTGAATCC

Supplementary Table 2. Gene specific primers used for RT-qPCR

	Antibody	Label	Clone	Company
PBMC panel	Fixable viability	APC-ef780	N.A.	eBioscience
	Surface CD11c	PerCP-Cy5.5	3.9	Thermo Scientific
	Surface CD1c	APC	AD5-8E7	Miltenyi
	Surface CD19	AF700	HIB19	eBioscience
	Surface CD56	AF700	B159	BD
	Surface CD3	PE/Cy7	UCHT1	Biologend
	Surface CD4	BV510	RPA-T4	Biologend
	Surface HLA-DR	BV605	G46-6	BD
	Surface CD14	BV785	M5E2	Biologend
	Intracellular IL-6	PE	MQ2-6A3	BD
Co-culture panel	Fixable viability	APC-ef780	N.A.	eBioscience
	Surface CD3	AF700	UCHT1	Biologend
	Surface CD4	AF488	RPA-T4	BD
	Surface CD1c	APC	AD5-8E7	Miltenyi
	Intracellular IFN γ	PE	4S.B3	BD

Supplementary Table 3. Antibody panels for used for flow cytometry .