

Supplementary Table 1. 48 miR in SSc study.

Assay Name	Assay ID	Mature miRNA sequence
hsa-let-7a-5p	000377	UGAGGUAGUAGGUUGUUAUAGUU
hsa-let-7c	000379	UGAGGUAGUAGGUUGUAUGGUU
hsa-miR-10a	000387	UACCCUGUAGAUCCGAAUUUGUG
hsa-miR-15a	000389	UAGCAGCACAUAAUGGUUUGUG
hsa-miR-16	000391	UAGCAGCACGUAAAUAUUGGCG
hsa-miR-17	002308	CAAAGUGCUUACAGUGCAGGUAG
hsa-miR-18a-5p	002422	UAAGGUGCAUCUAGUGCAGAUAG
hsa-miR-20a	000580	UAAAGUGCUUAUAGUGCAGGUAG
hsa-miR-21	000397	UAGCUUAUCAGACUGAUGUUGA
hsa-miR-24	000402	UGGCUCAGUUCAGCAGGAACAG
hsa-miR-27a-3p	000408	UUCACAGUGGCUAAGUUCCGC
hsa-miR-29a	002112	UAGCACCAUCUGAAAUCGGUUA
hsa-miR-29b-3p	000413	UAGCACCAUUUGAAAUCAGUGUU
hsa-miR-29c-3p	000587	UAGCACCAUUUGAAAUCGGUUA
hsa-miR-31-5p	002279	AGGCAAGAUGCUGGCAUAGCU
hsa-miR-34a	000426	UGGCAGUGCUUAGCUGGUUGU
hsa-miR-92a	000431	UAUUGCACUUGUCCCCGCCUGU
hsa-miR-101	002253	UACAGUACUGUGUAACUGAA
hsa-miR-106a	002169	AAAAGUGCUUACAGUGCAGGUAG
hsa-miR-125a-3p	002199	ACAGGUGAGGUUCUUGGGAGCC
hsa-miR-125b	000449	UCCCUGAGACCCUAACUUGUGA
hsa-miR-129-5p	000590	CUUUUUGCGGUCUGGGCUUGC
hsa-miR-142-3p	000464	UGUAGUGUUUCCUACUUUAUGGA
hsa-miR-145-5p	002278	GUCCAGUUUUCCCAGGAAUCCU
hsa-miR-146a	000468	UGAGAACUGAAUCCAUGGGUU
hsa-miR-146b	001097	UGAGAACUGAAUCCAUGGCU
hsa-miR-150	000473	UCUCCCAACCCUUGUACCAGUG
hsa-miR-155	002623	UUAAUGCUALCGUGAUAGGGGU
hsa-miR-181a	000480	AACAUUCAACGCUGUCGGUGAGU
hsa-miR-181b	001098	AACAUUCAUUGCUGUCGGUGGG
hsa-miR-184	000485	UGGACGGAGAACUGAUAGGGU
hsa-miR-192-5p	000491	CUGACCUAUGAAUUGACAGCC
hsa-miR-196a	247010_mat	UAGGUAGUUUCAUGUUGUUGGG
hsa-miR-203	000507	GUGAAAUGUUUAGGACCACUAG
hsa-miR-208	000511	AUAAGACGAGCAAAAGCUUGU
hsa-miR-210	000512	CUGUGCGUGUGACAGCGGCUGA
hsa-miR-221	000524	AGCUACAUUGUCUGCUGGGUUUC

hsa-miR-223	002295	UGUCAGUUUGUCAAAUACCCCA
hsa-miR-342-3p	002260	UCUCACACAGAAAUCGCACCGU
hsa-miR-375	000564	UUUGUUUCGUUCGGCUCGCGUGA
hsa-miR-383	000573	AGAUCAGAAGGUGAUUGUGGCU
hsa-miR-409-3p	002332	GAAUGUUGCUCGGUGAACCCU
hsa-miR-423-5p	002340	UGAGGGGCAGAGAGCGAGACUUU
hsa-miR-590-5p	001984	GAGCUUAUUCAUAAAAGUGCAG
hsa-miR-638	001582	AGGGAUCGCAGGGGGUGGCCU
Cel-miR-39	000200	UCACCGGGUGUAAUCAGCUUG
Cel-miR-54	001361	UACCCGUAAUCUUCAUAAUCCGAG
Cel-miR-238	000248	UUUGUACUCCGAUGCCAUCAGA

SSc: systemic sclerosis; miRNA: microRNA.

Supplementary Table 2. Overview of 37 miRNA consistently detected in this study (non-failed, Cq < 30, present in at least 1/3 of the samples). Listed in order of decreasing abundance according to the mean of 40 HC samples. Expression arbitrarily expressed relative to the level of miR-125b.

hsa-miR-155	999654
hsa-miR-15a	650446
hsa-miR-150	637060
hsa-miR-34a	403181
hsa-miR-383	291083
hsa-miR-184	283123
hsa-miR-638	202993
hsa-miR-590-5p	108781
hsa-miR-181b	39268
hsa-miR-29a	37930
hsa-miR-16	17573
hsa-miR-409-3p	13598
hsa-miR-29b-3p	12170
hsa-miR-20a	7756
hsa-miR-106a	5599
hsa-miR-208	4709
hsa-miR-17	4363
hsa-miR-223	3720
hsa-miR-203	3643
hsa-miR-192-5p	3306
hsa-miR-92a	950
hsa-miR-146a	889
hsa-miR-221	177
hsa-miR-21	168
hsa-miR-146b	135
hsa-miR-142-3p	130
hsa-miR-24	74
hsa-miR-27a-3p	34
hsa-miR-375	27
hsa-miR-342-3p	7
hsa-miR-423-5p	4
hsa-miR-145-5p	3
hsa-miR-181a	3
hsa-let-7c	3
hsa-miR-18a-5p	2
hsa-miR-29c-3p	2
hsa-miR-125b	1

miRNA: microRNA; HC: healthy controls.

Supplementary Table 3. Optimized miRNA profiles for diagnosis under the 3 conditions: SSc compared with the rest (HC and SLE), SSc compared with SLE, and SSc compared with HC. In each case, risk score equations based on stepwise linear regression are provided. The miRNA are listed from the most to the least significant in univariate tests. miRNA: microRNA; SSc: systemic sclerosis; SLE: systemic lupus erythematosus; HC: healthy controls

SSc versus Rest

hsa-miR-223
hsa-miR-638
hsa-miR-142-3p
hsa-miR-181b
hsa-miR-106a
hsa-miR-16
hsa-miR-17
hsa-miR-92a
hsa-miR-192-5p
hsa-miR-150
hsa-miR-24
hsa-miR-146a
hsa-miR-20a
hsa-miR-590-5p
hsa-miR-146b
hsa-miR-29b-3p
hsa-miR-342-3p
hsa-miR-221
hsa-miR-155
hsa-let-7c
hsa-miR-34a

Score = -3.5435 + 1.1447xmiR-223 + 1.3176xmiR-638 + 1.1898xmiR-142-3p - 2.5706xmiR-181b + 0.3930x miR-106a - 0.1842xmiR-16 - 0.3656xmiR-17 - 0.3039xmiR-92a + 0.4462xmiR-192-5p - 2.0214xmiR-150 + 0.1891xmiR-24

+ 0.2714xmiR-146a + 1.2288xmiR-20a + 0.5220xmiR-590-5p + 0.1243xmiR-146b + 0.9081xmiR-29b-3p -
0.1493xmiR-342-3p - 0.2417xmiR-221 + 4.4157xmiR-155 - 0.2706xlet-7c - 0.8262xmiR-34a

SSc versus SLE

hsa-miR-142-3p

hsa-miR-223

hsa-miR-150

hsa-miR-638

hsa-miR-181b

hsa-miR-15a

hsa-miR-155

hsa-miR-34a

hsa-miR-590-5p

hsa-miR-24

hsa-miR-208

hsa-miR-192-5p

hsa-miR-106a

hsa-miR-29b-3p

Score = 8.369 + 1.506xmiR-142-3p + 0.3386xmiR-223 - 2.753xmiR-150 + 0.7576xmiR-638 - 1.822xmiR-181b -
0.5120xmiR-15a + 3.083xmiR-155 - 0.09617xmiR-34a + 0.9538xmiR-590-5p + 0.1266xmiR-24 - 0.1964xmiR-208 +
0.3251xmiR-192-5p + 0.00002325xmiR-106a + 1.108xmiR-29b-3p

SSc versus HC

hsa-miR-106a

hsa-miR-16

hsa-miR-638

hsa-miR-223

hsa-miR-92a

hsa-miR-17

hsa-miR-181b

hsa-miR-20a

hsa-miR-146a

hsa-miR-146b

hsa-miR-192-5p

hsa-miR-24

hsa-miR-221

hsa-miR-29b-3p

hsa-miR-142-3p

hsa-miR-590-5p

hsa-miR-342-3p

hsa-miR-150

hsa-miR-125b

hsa-let-7c

hsa-miR-15a

hsa-miR-208

$$\begin{aligned} \text{Score} = & 396 + 7.829x\text{miR-106a} + 39.6x\text{miR-16} - 34.78x\text{miR-638} + 8.588x\text{miR-223} - 0.8832x\text{miR-92a} - 4.23x\text{miR-17} + \\ & 45.7x\text{miR-181b} + 36.38x\text{miR-20a} + 16.90x\text{miR-146a} + 10.07x\text{miR-146b} - 1.128x\text{miR-192-5p} - 0.8183x\text{miR-24} - \\ & 6.382x\text{miR-221} + 24.83x\text{miR-29b-3p} + 2.291x\text{miR-142-3p} + 44.68x\text{miR-590-5p} + \\ & 4.763x\text{miR-342-3p} - 137.5x\text{miR-150} + 3.855x\text{miR-125b} - 16.13x\text{let-7c} + 78.32x\text{miR-15a} - 0.09115x\text{miR-208} \end{aligned}$$