Supplementary tables

Table S1. Baseline characteristics and inclusion and exclusion criteria for RIF patients and fertile controls in the GSE111974 dataset.

Table S2. Baseline characteristics and inclusion and exclusion criteria for RIF patients and fertile controls in the GSE92324 dataset.

Table S3. Gene Primers for RT-qPCR.

Table S1. Baseline characteristics and inclusion and exclusion criteria for RIF patients and fertile controls in the GSE111974 dataset [1].

	Control (n = 24)	**RIF (n =24)**	***p* value**
Age (years)	31.13 ± 3.86	32.76 ± 2.33	NS
BMI (kg/m^2)	23.15 ± 1.65	25.36 ± 1.43	NS
LH + day	7–10	7–10	-
Day 3 FSH (mIU/mL)	7.55 ± 1.67	6.52 ± 3.18	NS
Day 3 E2 (mIU/mL)	61.86 ± 25.56	56.41 ± 65.10	NS
Day 3 prolactin (ng/mL)	14.69 ± 5.66	12.45 ± 4.17	NS
Day 3 TSH (μIU/mL)	2.16 ± 1.42	2.28 ± 1.04	NS
Inclusion criteria	having a history of ≥1 live birth	failure of pregnancy in ≥3 consecutive IVF cycles with ≥1 transfer(s) of good quality embryo in each cycle	-
Exclusion criteria	active pelvic infections, undiagnosed vaginal bleeding, uterine anomalies, endometriosis, karyotype anomalies, and under any medications		-

BMI, body mass index; LH, luteinizing hormone; FSH, follicle-stimulating hormone; E2, estradiol; TSH, thyroid stimulating hormone; RIF, recurrent implantation failure; NS, nonsignificant.

Table S2. Baseline characteristics and inclusion and exclusion criteria for RIF patients and fertile controls in the GSE92324 dataset [2].

	Control (n = 8)	**RIF (n =10)**
Age (years)	20–40	20–40
HCG + day	6–7	6–7
LH, FSH, E2, P4, AMH, and prolactin	normal	normal
Normal endometrial thickness	8 mm	8 mm
Inclusion criteria	having a history of full-term normal delivery	failure of pregnancy in ≥2 consecutive IVF cycles with ≥4 transfer(s) of good quality embryo
Exclusion criteria	polycystic ovarian disease, endometriosis, hormonal abnormalities, autoimmune disorders, and male infertility	

HCG, human chorionic gonadotropin; LH, luteinizing hormone; FSH, follicle-stimulating hormone; E2, estradiol; P4, Progesterone; AMH, anti-Mullerian hormone; RIF, recurrent implantation failure.

Table S3. Gene Primers for RT-qPCR.

Gene	Sequence (5' -> 3')
NRCAM (Human)	Forwards: CTTCCAAGGCAGCAAGACTC Reverse: CTTCAAAGACGAGGGAGCAC
ATP13A4 (Human)	Forwards: GCTGCTCTACTGGGAGACAAA Reverse: CACCAGCTTAGGGTAGGCAC
TRIB2 (Human)	Forwards: ATGAACATACACAGGTCTACCCC Reverse: GGGCTGAAACTCTGGCTGG
SHROOM3 (Human)	Forwards: CCCTCTCGGGGCGTCTAGCC Reverse: GCCCAGCACTACTCGCTCCC
FAM155B (Human)	Forwards: CACGAAAGGCTGTAAGGCTG Reverse: TCGGGGAGTATAAAGGGGCA
ZNF436 (Human)	Forwards: TAAGCCCAGTAGTGTCAGTTT Reverse: CATTATAGTACCCACCCAGAG
SLC25A29 (Human)	Forwards: GGGGAGGACGAGGAGGAAA Reverse: GCCTGCCACACCCCC
PDZD8 (Human)	Forwards: AAGACCCGCTGATCGACTTC Reverse: CTTGCAAGGTCTGGTATGGAAA
RAB32 (Human)	Forwards: TGGGACAGCAGGACTCTGG Reverse: ACTCGGGTCATGTTGCCAA
HOXB3 (Human)	Forwards: ATGCAGGGCAGTCCGGTGTA Reverse: GGTGATGGGAAAGGTGGTTG
ACTB (Human)	Forwards: GTGGCCGAGGACTTTGATTG Reverse: CCTGTAACAACGAATCTCATATT

References

1. Bastu, E.; Demiral, I.; Gunel, T.; Ulgen, E.; Gumusoglu, E.; Hosseini, M.K.; Sezerman, U.; Buyru, F.; Yeh, J. Potential Marker Pathways in the Endometrium That May Cause Recurrent Implantation Failure. *Reprod Sci* **2019**, *26*, 879-890, doi:10.1177/1933719118792104.
2. Pathare, A.D.S.; Zaveri, K.; Hinduja, I. Downregulation of genes related to immune and inflammatory response in IVF implantation failure cases under controlled ovarian stimulation. *American Journal of Reproductive Immunology (New York, N.Y. : 1989)* **2017**, *78*, doi:10.1111/aji.12679.

Supplementary figures

Figure S1. Construction of co-expression network.

Figure S5. The intersection of the 85 DEGs and 238 ERA genes.

Figure S6. Heatmap of the correlations between immune cells in the GSE111974 dataset.

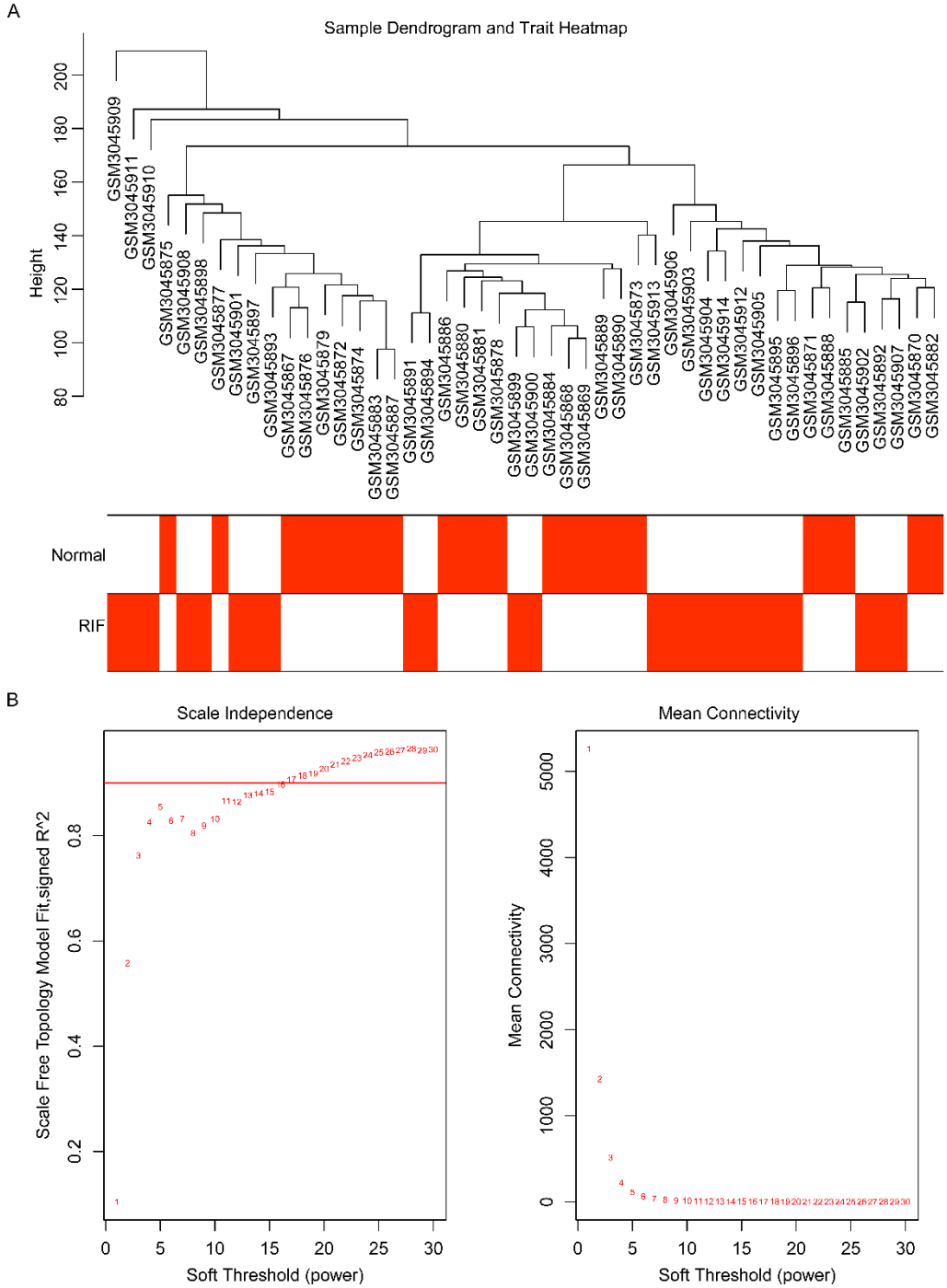

Figure S1. Construction of co-expression network. (A) Sample dendrogram and trait heatmap. (B) Analysis of the scale free topology model fit and the mean connectivity of different soft threshold powers.

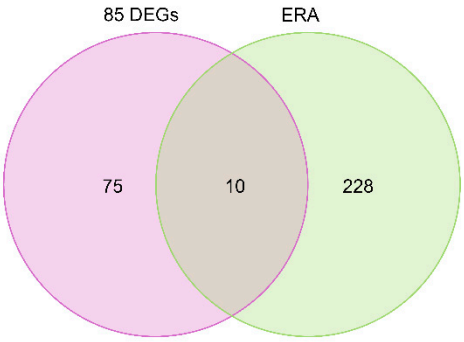

Figure S5. The intersection of the 85 DEGs and 238 ERA genes.

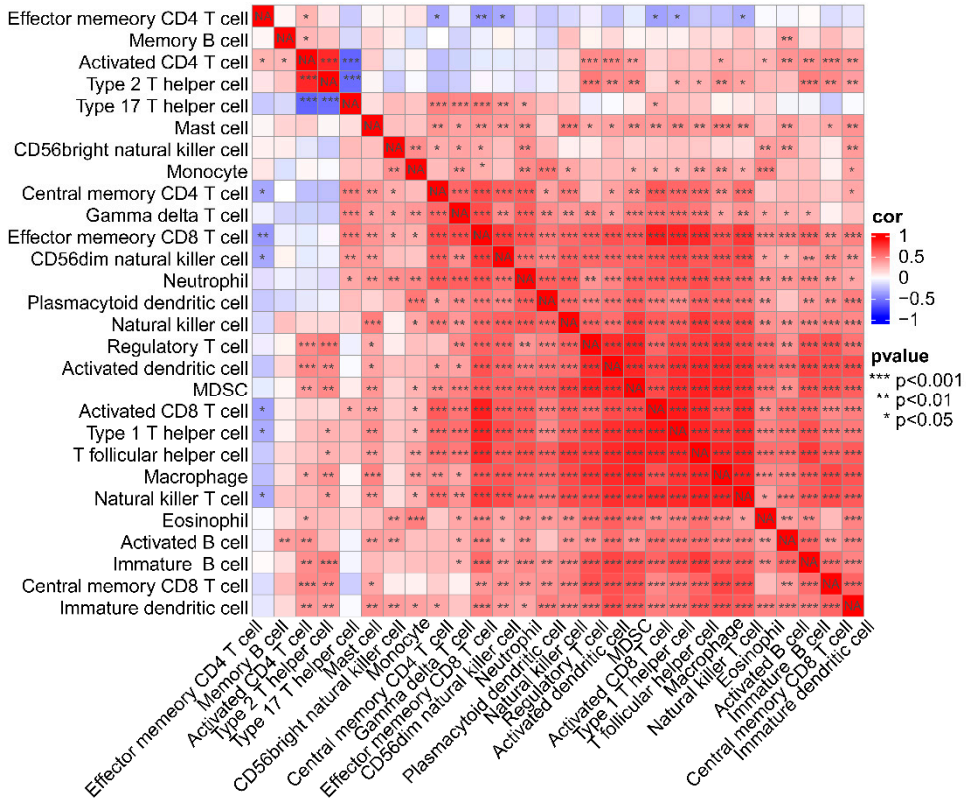

Figure S6. Heatmap of the correlations between immune cells in the GSE111974 dataset.