

## Supporting Information for

### *Imbalance of Th17, Treg, and Helper innate lymphoid cell in the peripheral blood of patients with rheumatoid arthritis*

Ting Wang<sup>1,2♦</sup>, Jinbing Rui<sup>3♦</sup>, Wenqi Shan<sup>1</sup>, Fei Xue<sup>1</sup>, Dingqi Feng<sup>1</sup>, Liyang Dong<sup>1,4</sup>, Jiahui Mao<sup>1</sup>, Yang Shu<sup>1</sup>, Chaoming Mao<sup>4</sup>, Xuefeng Wang<sup>1,4\*</sup>

<sup>1</sup> Department of Central Laboratory, The Affiliated Hospital of Jiangsu University, Zhenjiang 212001, China;

<sup>2</sup> Department of Clinical Laboratory, The Affiliated Hospital of Jiangsu University, Zhenjiang 212001, China;

<sup>3</sup> Department of Rheumatology, The Affiliated Hospital of Jiangsu University, Zhenjiang 212001, China;

<sup>4</sup> Department of Nuclear Medicine and Institute of Oncology, The Affiliated Hospital of Jiangsu University, Zhenjiang 212001, China;

♦ These authors contributed equally to this work.

\*Correspondence to: Xuefeng Wang, Department of Central Laboratory, The Affiliated Hospital of

Jiangsu University, 438 Jiefang Road, Zhenjiang 212001, China. Phone: +86-0511-8502-1135; E-mail:

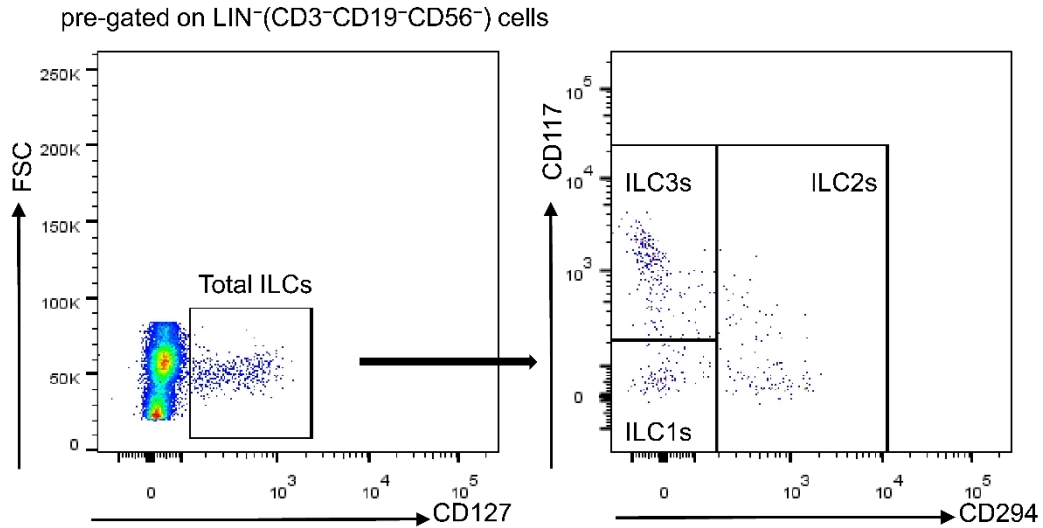
xuefengwang@ujs.edu.cn; ORCID: 0000-0002-5980-6530

**Table S1** Characteristics of patients with RA and healthy controls

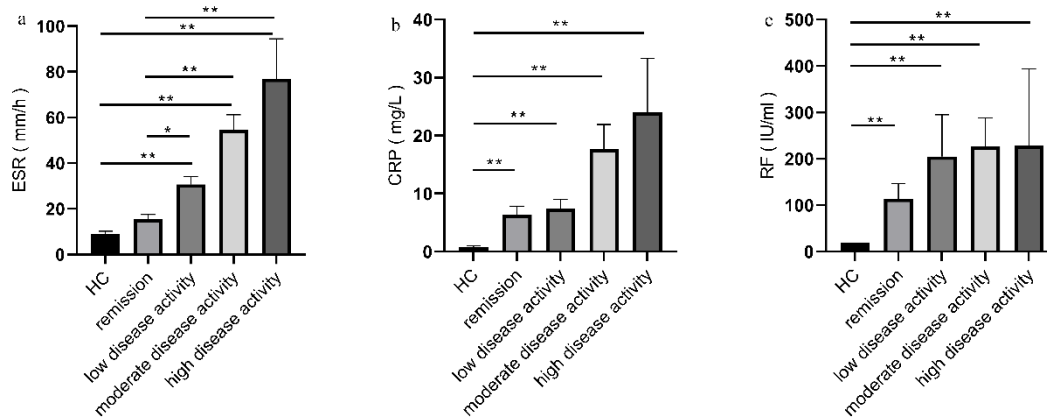
Demographics	RA patients (n = 86)	Healthy (n = 50)	p value
Age (years) - mean $\pm$ SEM	55.43 $\pm$ 1.46	51.46 $\pm$ 1.40	0.0721
Sex - female/male	12/74	10/40	>0.999
RF - median (range)	54.90 ( 23.03 - 200.3 )	-	-
ACPA - median (range)	234.10 ( 37.18 - 800 )	-	-
ESR (mm/h) - median (range)	25.00 ( 12.50 - 51.00 )	4.20 ( 2.45 - 6.90 )	<0.0001
CRP (mg/L) - median (range)	6.30 ( 2.25 - 16.35 )	0.50 ( 0.50 - 1.23 )	<0.0001
Disease duration (years) - median (range)	6.00 ( 1.25 - 10.00 )	-	-
DAS28 - median (range)	3.12 ( 2.35 - 4.11 )	-	-

*RF*, rheumatoid factor; *ACPA*, anti-citrullinated protein antibodies; *ESR*, erythrocyte sedimentation rate; *CRP*, C-reactive protein; *DAS28*, disease activity score in 28 joints.

**Figure S1 Gating strategies for the identification of ILCs.** Isolated cells were pre-gated on  $LIN^{-}(CD3^{-}CD19^{-}CD56^{-})$  cells, then total ILCs ( $CD3^{-}CD19^{-}CD56^{-}CD127^{+}$ ), ILC1s ( $LIN^{-}CD294^{-}CD117^{+}$ ), ILC2s ( $LIN^{-}CD294^{+}$ ), and ILC3s ( $LIN^{-}CD294^{-}CD117^{+}$ ) in a representative sample.

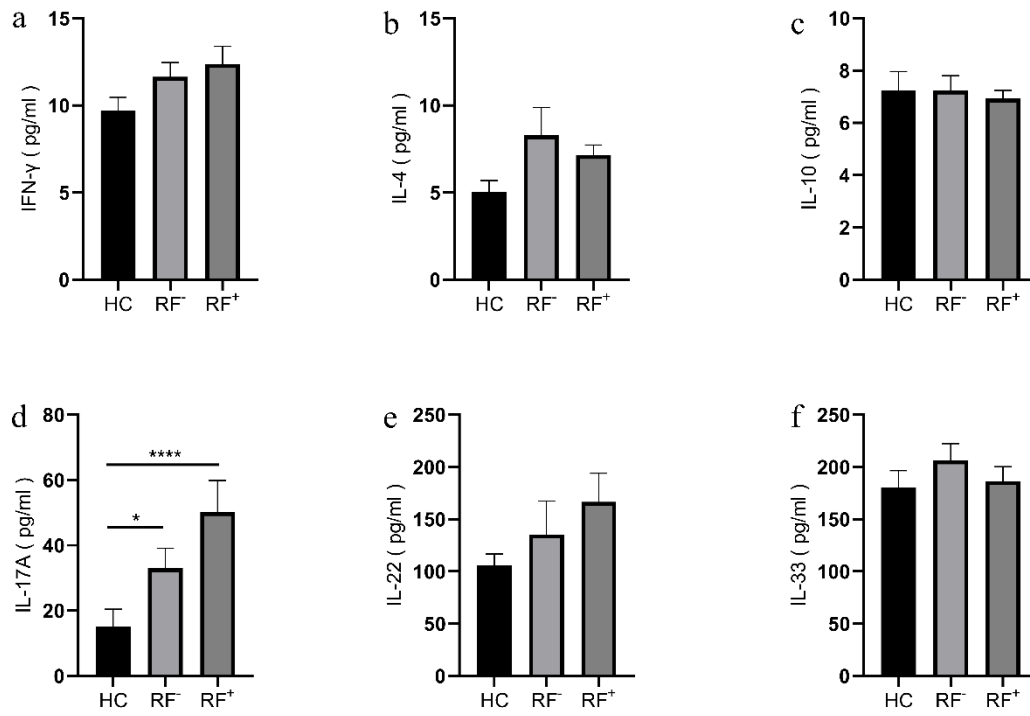


**Figure S2 Differences in ESR, CRP, and RF among HC and RA patients with different disease activity status.** (a)ESR, (b) CRP, (c) RF. Results are presented as mean  $\pm$  SEM. \*  $P < 0.05$ , \*\*  $P < 0.01$ .



**Figure S3. Cytokine analysis in sera by ELISA in HC, RF<sup>-</sup>, and RF<sup>+</sup> RA patients.**

(a) IFN- $\gamma$ , (b) IL-4, (c) IL-10, (d) IL-17A, (e) IL-22, and (f) IL-33. Results are presented as mean  $\pm$  SEM. \*  $P < 0.05$ , \*\*\*\*  $P < 0.0001$ .



**Figure S4. Cytokine analysis in sera by ELISA in HC, ACPA<sup>-</sup>, and ACPA<sup>+</sup> RA patients.**

(a) IFN- $\gamma$ , (b) IL-4, (c) IL-10, (d) IL-17A, (e) IL-22, and (f) IL-33. Results are presented as mean  $\pm$  SEM. \*  $P < 0.05$ , \*\*\*\*  $P < 0.0001$ .

