Figure S1. Experimental validation of the FCA-induced arthritis rat model. (A) Experimental timeline. (B) Changes in foot pad thickness. (C) Hematoxylin and eosin staining of the joint tissue (magnification x20 and x200). (D) Inflammatory cell infiltration score. (E) Macrophage hyperplasia. (F) Fibroplasia score. Data are presented as the mean \pm standard deviation (n=6). **P<0.01 vs. the control group. FCA, Freund's complete adjuvant; RA, rheumatoid arthritis.



Figure S2. Validation of relative gene expression in the RA model using western blotting. (A) Protein expression of the hub genes were verified using western blotting. Quantification of (B) DLGAP5, (C) KIF20A, (D) MELK and (E) NDC80 protein expression in rats with FCA-induced RA and control rats. Data are presented the as mean ± standard deviation (n=3). **P<0.01 vs. the control group. FCA, Freund's complete adjuvant; RA, rheumatoid arthritis; DLGAP5, discs large homolog-associated protein 5; KIF20A, kinesin family member 20A; MELK, maternal embryonic leucine zipper kinase; NDC80, nuclear division cycle 80.



Figure S3. Correlation analysis. Correlation analysis of (A) DLGAP5, (B) KIF20A, (C) MELK and (D) NDC80 with IL-12 and TNF- α . IL-12, interleukin 12; TNF- α , tumor necrosis factor- α ; DLGAP5, discs large homolog-associated protein 5; KIF20A, kinesin family member 20A; MELK, maternal embryonic leucine zipper kinase; NDC80, nuclear division cycle 80.

