



Supplementary Table 1. Clinical data of TAK patients collected monocytes.

| | TAK patients (n=16) |
|-------------------------------------------|---------------------|
| Age, years | 33.38 ± 9.99 |
| Female, n(%) | 11 (68.75%) |
| Duration, months | 60.56 ± 74.92 |
| Classification, n(%) | |
| I | 5 (31.25%) |
| IIa | 1 (6.25%) |
| IIb | 1 (6.25%) |
| III | 1 (6.25%) |
| IV | 1 (6.25%) |
| V | 7 (43.75%) |
| Erythrocyte sedimentation rate, mm/H | 23.03 ± 30.78 |
| C-reactive protein, mg/L | 14.39 ± 23.75 |
| Haemoglobin, g/L | 122.87 ± 25.43 |
| Interleukin-6, pg/mL | 7.15 ± 9.94 |
| NIH score <2, n(%) | 10 (62.50%) |
| Glucocorticoids <15mg/d | 9 (56.25%) |
| Received leflunomide treatment, n(%) | 8 (50%) |
| Received methotrexate treatment, n(%) | 1 (6.25%) |
| Complications other inflammatory diseases | None |
| other fibrotic diseases | None |

TAK: Takayasu's arteritis; NIH: National Institutes of Health.

Supplementary Figure 1. High dosage of MTX inhibits polarisation of M2 macrophages in TAK. (a) Expression of CD68⁺HLA-DR⁺ cells in human macrophages incubated with LPS and IFN-γ with/without intervention of glucocorticoids. (b) Expression of CD68⁺CD163⁺ cells in human macrophages incubated with IL-4 and IL-13 with/without intervention of glucocorticoids. (c) The ratio of CD68⁺HLA-DR⁺ and CD68⁺CD163⁺ cells in human macrophages under intervention of glucocorticoid (1μg/ml). (d) Expression of CD68⁺HLA-DR⁺ cells in human macrophages incubated with LPS and IFN-γ with/without intervention of MTX (50 or 100 nM). (e) Expression of CD68⁺HLA-DR⁺ cells in human macrophages incubated with IL-4 and IL-13 with/without intervention of MTX (50 or 100 nM). (f) Relative expression of the mRNA of *IL10* and *IRF4* in M2 macrophages derived from THP-1 cells co-cultured with methotrexate (50 or 100 nM).

**p*<0.05 (n=5). MTX: methotrexate; LEF: leflunomide; GC: glucocorticoid.

Supplementary Table 2. Clinical data of TAK patients collected arterial specimens.

| No. | Age | Gender | ESR, mm/H | CRP, mg/L | Macrophage distribution |
|-----|-----|--------|-----------|-----------|------------------------------------------------------|
| 1 | 65 | M | 15 | 15.6 | M2 filtrated in adventitia |
| 2 | 51 | M | - | 14.2 | M1 obviously filtrated and accumulated in adventitia |
| 3 | 49 | F | 30 | 0.5 | M1 obviously filtrated and accumulated in adventitia |
| 4 | 61 | M | 21 | 3.8 | M2 filtrated in adventitia |

TAK: Takayasu's arteritis; ESR: Erythrocyte sedimentation rate; CRP: C-reactive protein.

Supplementary Table 3. Markers of M1 and M2 macrophages.

| | M1 macrophage | M2 macrophage |
|---------|--------------------------------|--------------------------------|
| Markers | CD68, CD86, HLA-DR, IRF5, IL12 | CD68, CD163, IRF4, IL10, CCL22 |

Supplementary Table 4. Primes used to detect profibrotic and M2-related genes.

| Gene | Forward Primer Sequence | Reverse Primer Sequence |
|--------------|-------------------------|-------------------------|
| <i>LAGL3</i> | ATGGCAGACAATTTTCGCTCC | ATGGCAGACAATTTTCGCTCC |
| <i>PDGFB</i> | ATGGCAGACAATTTTCGCTCC | CGTTGGTGCGGTCTATGAG |
| <i>TGFB1</i> | CGTTGGTGCGGTCTATGAG | GTGGGTTTCCACCATTAGCAC |
| <i>IL10</i> | TCAAGGCGCATGTGAACTCC | GATGTCAAACACTCATGGCT |
| <i>IRF4</i> | ACCCGAAATCCCGTACCA | GGCAACCATTTTACAAGCTG |
| <i>GAPDH</i> | GAGTCAACGGATTGGTCGT | GAGTCAACGGATTGGTCGT |