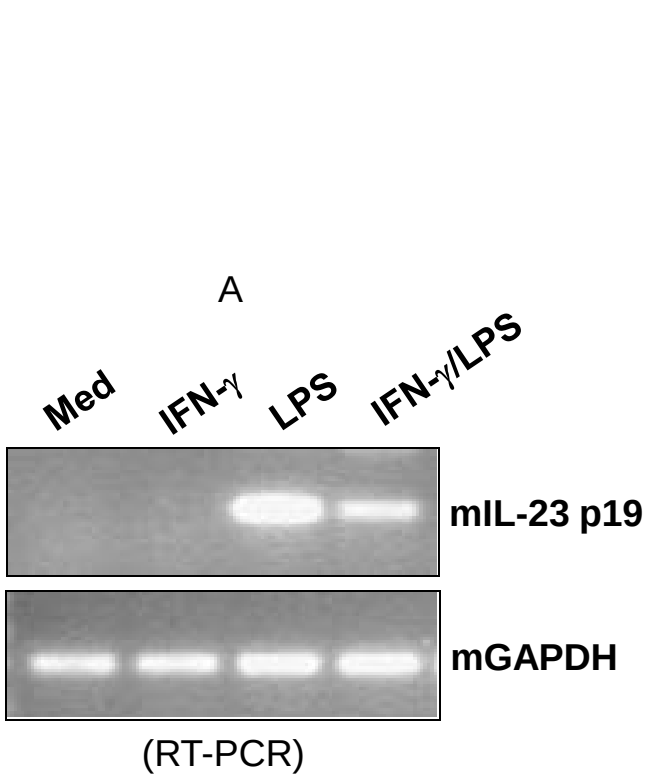
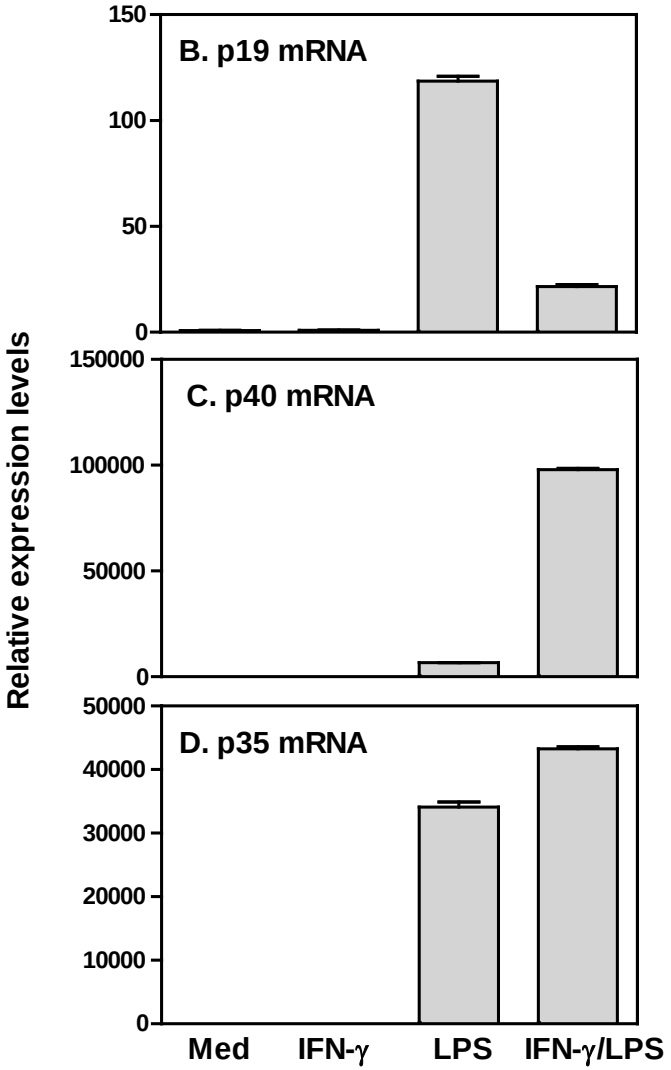
Supplemental Fig. 1. IFN-γ differentially regulates LPS-induced IL-12 and IL-23 mRNA expression in mouse peritoneal macrophage





Supplemental Fig. 2. Mouse IL-23 p19 complete cDNA

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121  TTGCAGAGCA GTAATAATGC TATGGCTGTT GCCCTGGGTC ACTCAGGGCC TGGCTGTGCC
181  TAGGAGTAGC AGTCCTGACT GGGCTCAGTG CCAGCAGCTC TCTCGGAATC TCTGCATGCT
241  AGCCTGGAAC GCACATGCAC CAGCGGGACA TATGAATCTA CTAAGAGAAG AAGAGGATGA
301  AGAGACTAAA AATAATGTGC CCCGTATCCA GTGTGAAGAT GGTTGTGACC CACAAGGACT
361  CAAGGACAAC AGCCAGTTCT GCTTGCAAAG GATCCGCCAA GGTCTGGCTT TTTATAAGCA
421  CCTGCTTGAC TCTGACATCT TCAAAGGGGA GCCTGCTCTA CTCCCTGATA GCCCCATGGA
481  GCAACTTCAC ACCTCCCTAC TAGGACTCAG CCAACTCCTC CAGCCAGAGG ATCACCCCCG
541  GGAGACCCAA CAGATGCCCA GCCTGAGTTC TAGTCAGCAG TGGCAGCGCC CCCTTCTCCG
601  TTCCAAGATC CTTCGAAGCC TCCAGGCCTT TTTGGCCATA GCTGCCCGGG TCTTTGCCCA
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1261 tgatattatt tatccttgta acagtataga tgatggttat ttattctatt tataaggaat
1321 tatgtatttt tttttcaata aagatttatt tatgtggc
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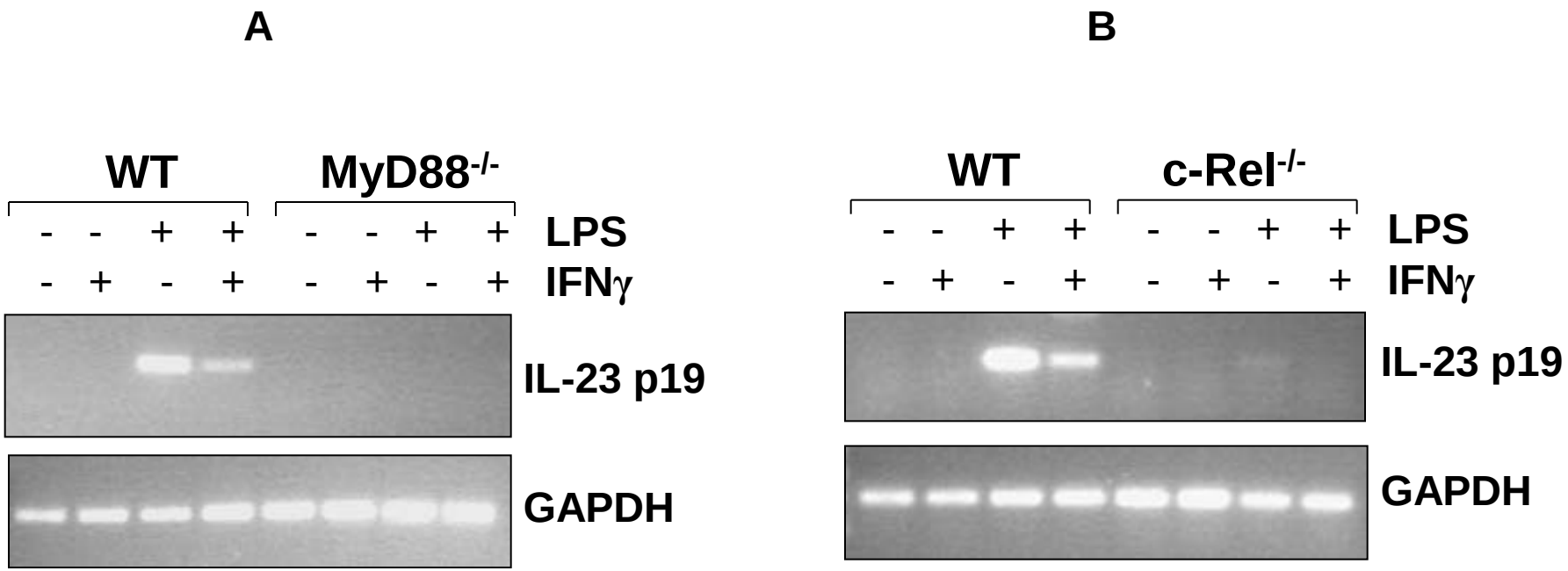
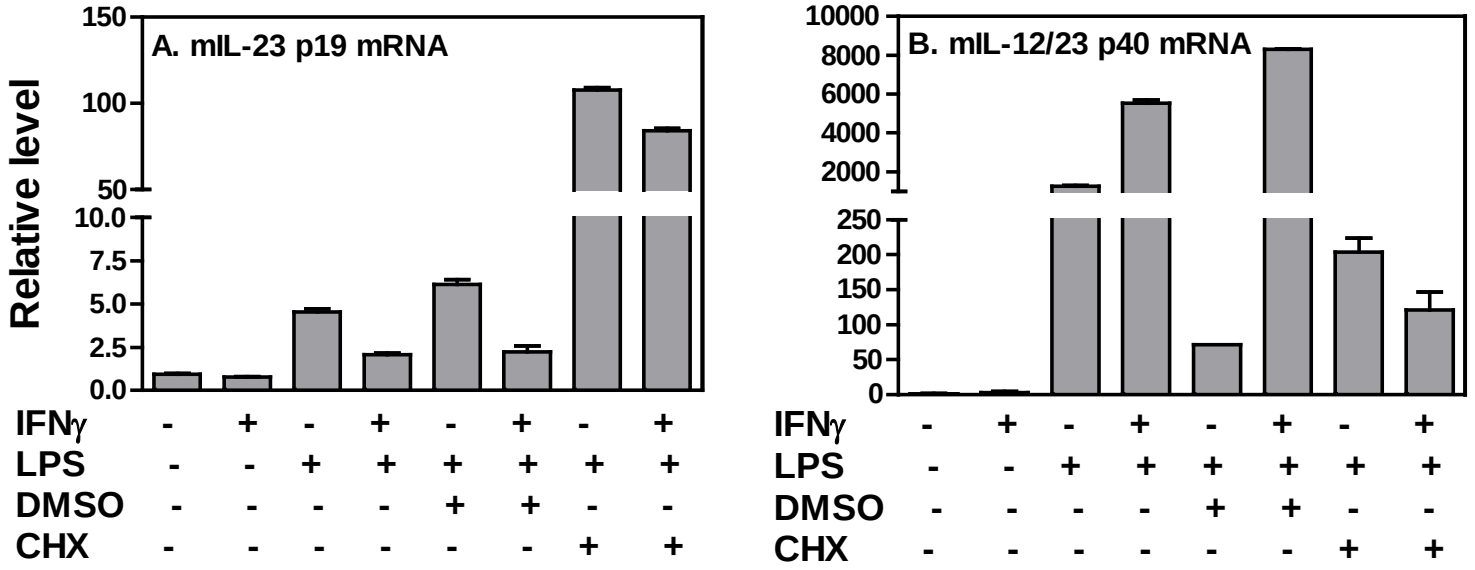
Characters labeled in red color : the coding sequence
Characters labeled in green color : the putative AU-rich elements (AREs)

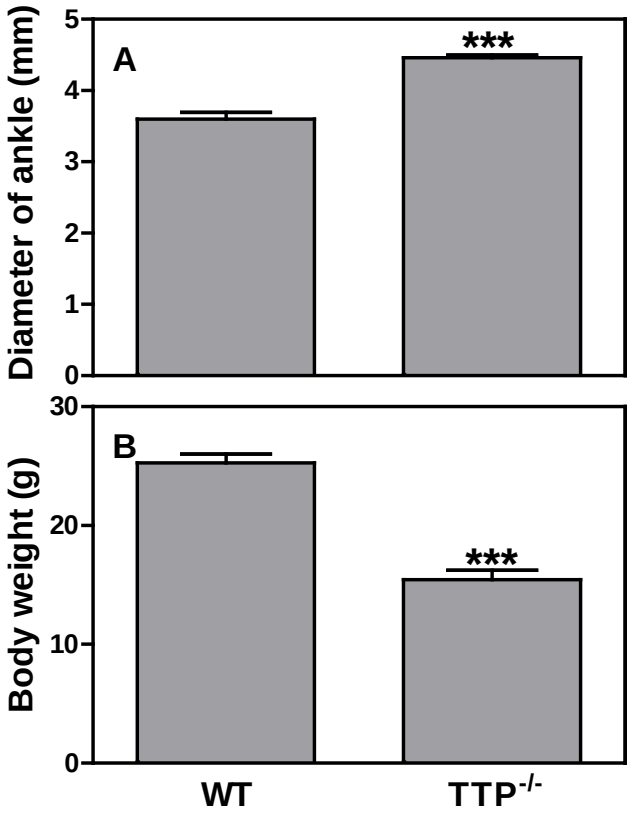
Supplemental Fig. 3. LPS-induced IL-23 p19 expression is dependent on MyD88/c-Rel pathway in macrophages



Supplemental Fig. 4. The inhibitory effect of IFN-γ on LPS-induced p19 expression does not need de novo protein synthesis



Supplemental Fig. 5. Spontaneous joint inflammation in TTP knockout mice



Supplemental figure legends

Supplemental figure 1. Differential effects of IFN-γ on p19 and p35 mRNA expression in mouse peritoneal macrophages. Total RNA was isolated from peritoneal macrophages of wild type C57BL/6 mice and subjected to measure p19 **(A)**, p40 **(B)** and p35 **(C)** mRNA expression by qRT-PCR. Data were normalized relative to GAPDH mRNA expression levels in each respective sample and further normalized to the results from the un-treated group (Med), which was set as 1. Data are representative of one of three separate experiments with similar results.

Supplemental figure 2. Schematic of mouse IL-23 p19 3'UTR. Listed is the complete sequence of IL-23 p19 mRNA (accession number: AF301619). The translated region starting with ATG is labeled in red color, whereas both 5'UTR and 3'UTR are represented in black and white. Within the 3'UTR region, there are six putative ARE sites labeled in green adjacent to the 3'end.

Supplemental figure 3. MyD88 and NF-kB c-Rel are critical for IL-23 p19 expression. Total RNA was extracted from peritoneal macrophages of WT, MyD88$^{-/-}$ **(A)**, and c-Rel$^{-/-}$ **(B)** mice treated with IFN-γ, LPS, or IFN-γ plus LPS for 4 h and subjected to RT-PCR analysis for p19 mRNA expression. GAPDH was served as loading control. Data represented pooled RNA from four mice.

Supplemental figure 4. New protein synthesis is not required for IFN-γ-mediated p19 mRNA inhibition. 3×10^6 peritoneal macrophages isolated from C57BL/6 mice were cultured in 2 ml RPMI1640 complete medium with 10% FBS and first stimulated with 1 μg/ml LPS for 30 min, followed by addition of 3 μl cycloheximide (10 μg/ml) for additional 30 min. Then 10

ng/ml IFN-γ was added into the designed groups for 4 h as indicated. Same amount of DMSO (3 μl) was added to cells treated with LPS or IFN-γ plus LPS as negative controls. Total RNA was extracted and p19 **(A)** and p40 **(B)** mRNA expression measured by qRT-PCR. Data were normalized relative to GAPDH mRNA expression levels in each respective sample and further normalized to the results from the un-treated group, which was set as 1. Results shown are one of two independent experiments with similar results.

Supplemental figure 5. Spontaneous arthritis happens in TTP knockout mice. For TTP knockout and wild type mice, the diameter of hind ankles and body weight were monitored every 2-3 days. The ankle sizes in diameters in two dimensions (horizontal and vertical) **(A)** and body weight **(B)** are shown for WT and TTP knockout mice at age 56 days. Data represent 7 mice in each group with standard deviations (SD). ***: $p<0.0001$ between two groups.