

Supplementary information

Macrophages regulate vascular smooth muscle cell function during atherosclerosis progression through IL-1 β /STAT3 signaling

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Yuzhou Xue and Minghao Luo contributed equally in this paper.

CONTENT

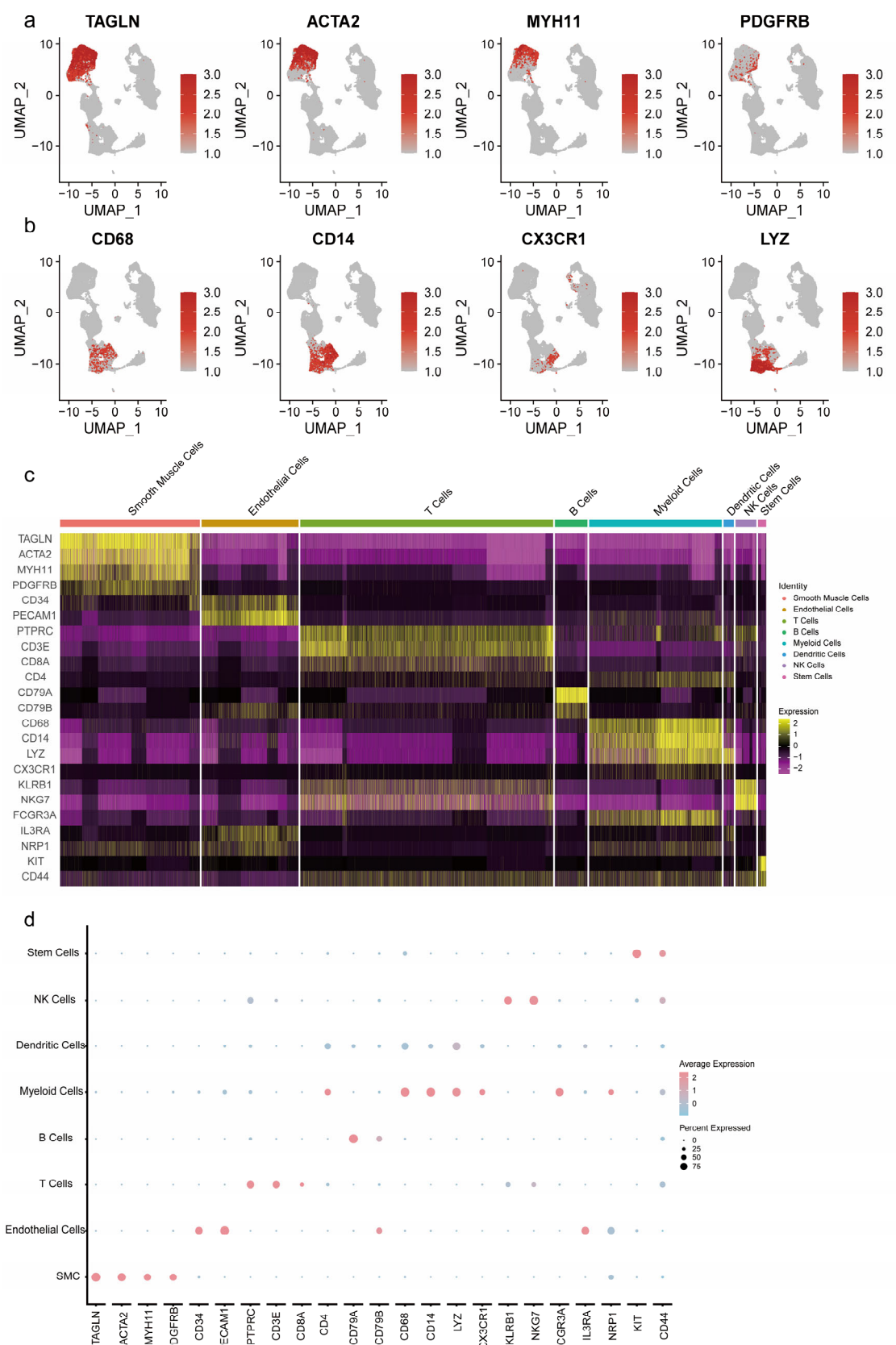
1. Supplementary Figure 1-11

2. original blots

3. original blots with molecular marker ladders

1. Supplementary Figure 1-11

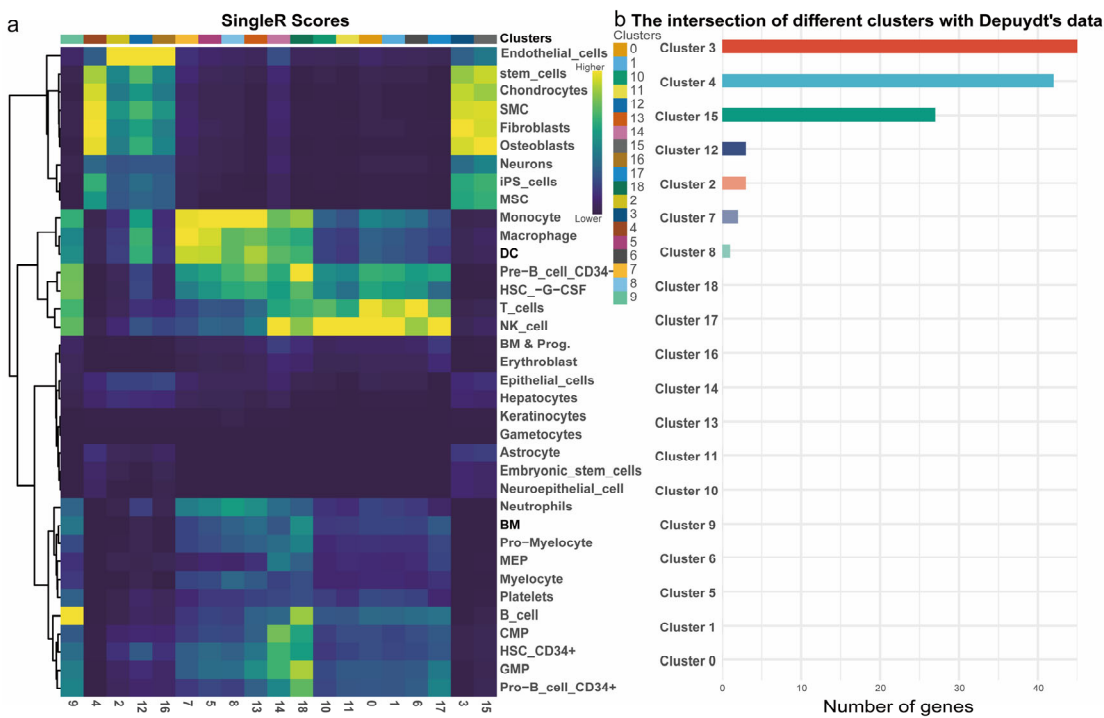
Supplementary Figure 1



Supplementary Figure 1. scRNA-seq analysis revealed 8 distinct cell types. Feature plots of cell marker genes of (a) vascular smooth muscle cells (VSMCs) and (b) myeloid cells among

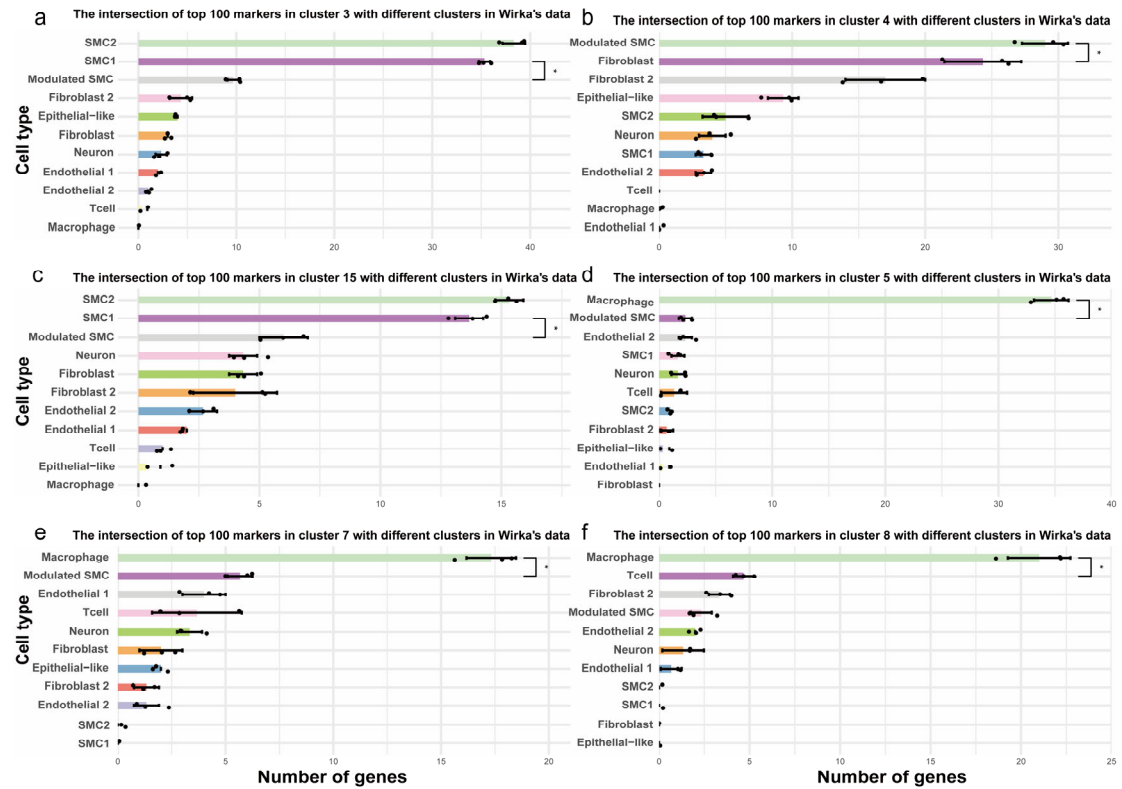
different cell clusters. **c** Heatmap of top marker gens per cell type. **d** Dot plots showing the expression and percent expressed of marker genes in every cell type.

Supplementary Figure 2



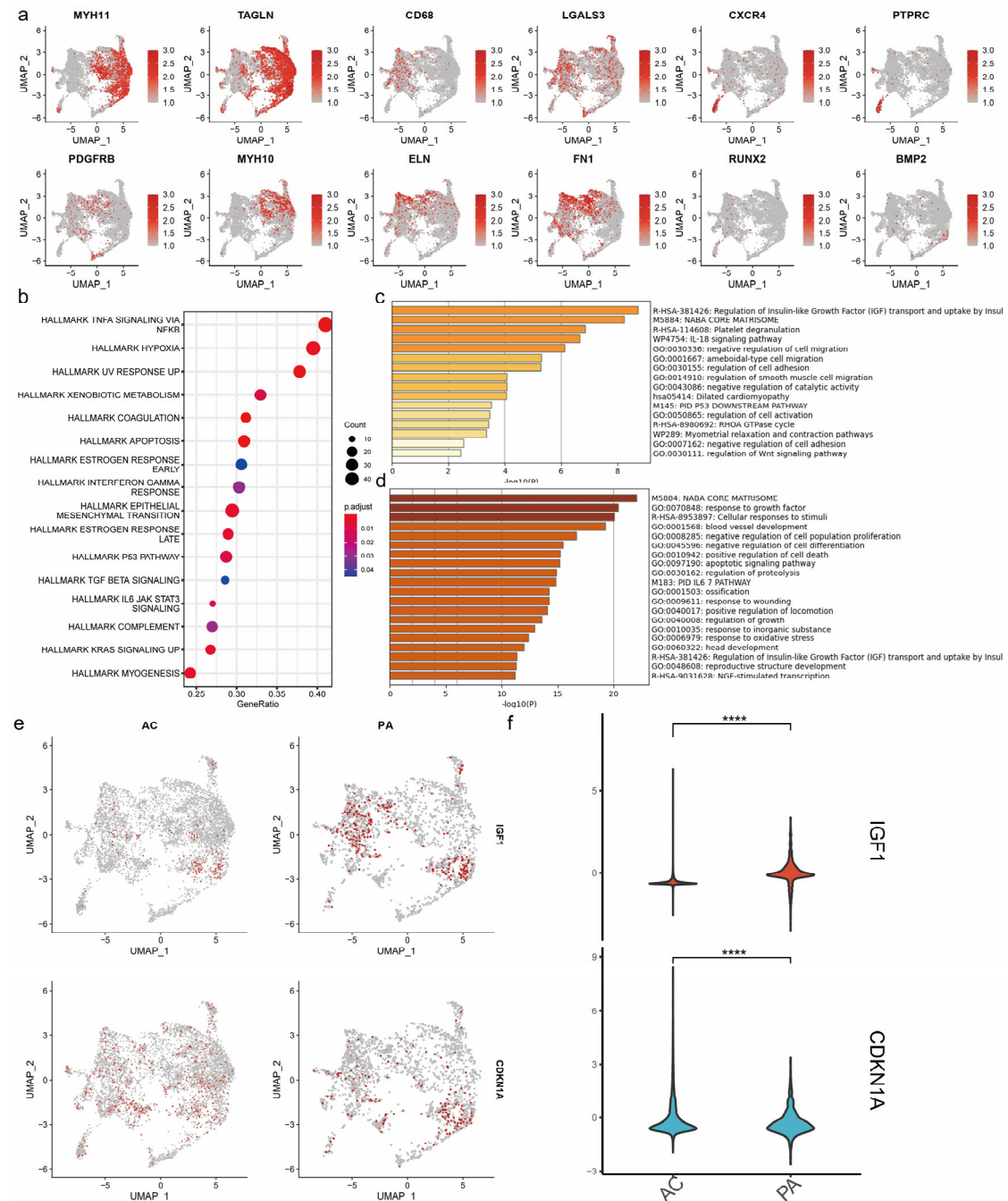
Supplementary Figure 2. Validation the identity of vascular smooth muscle cell (VSMC) clusters. **a.** Different population identities by similarity to known cell type in Human Primary Cell Atlas (HPCA) reference RNA-seq data sets through SingleR analysis. **b.** intersection analysis of top markers among different clusters with top marker genes in SMC subset identified in Depuydt's data.

Supplementary Figure 3



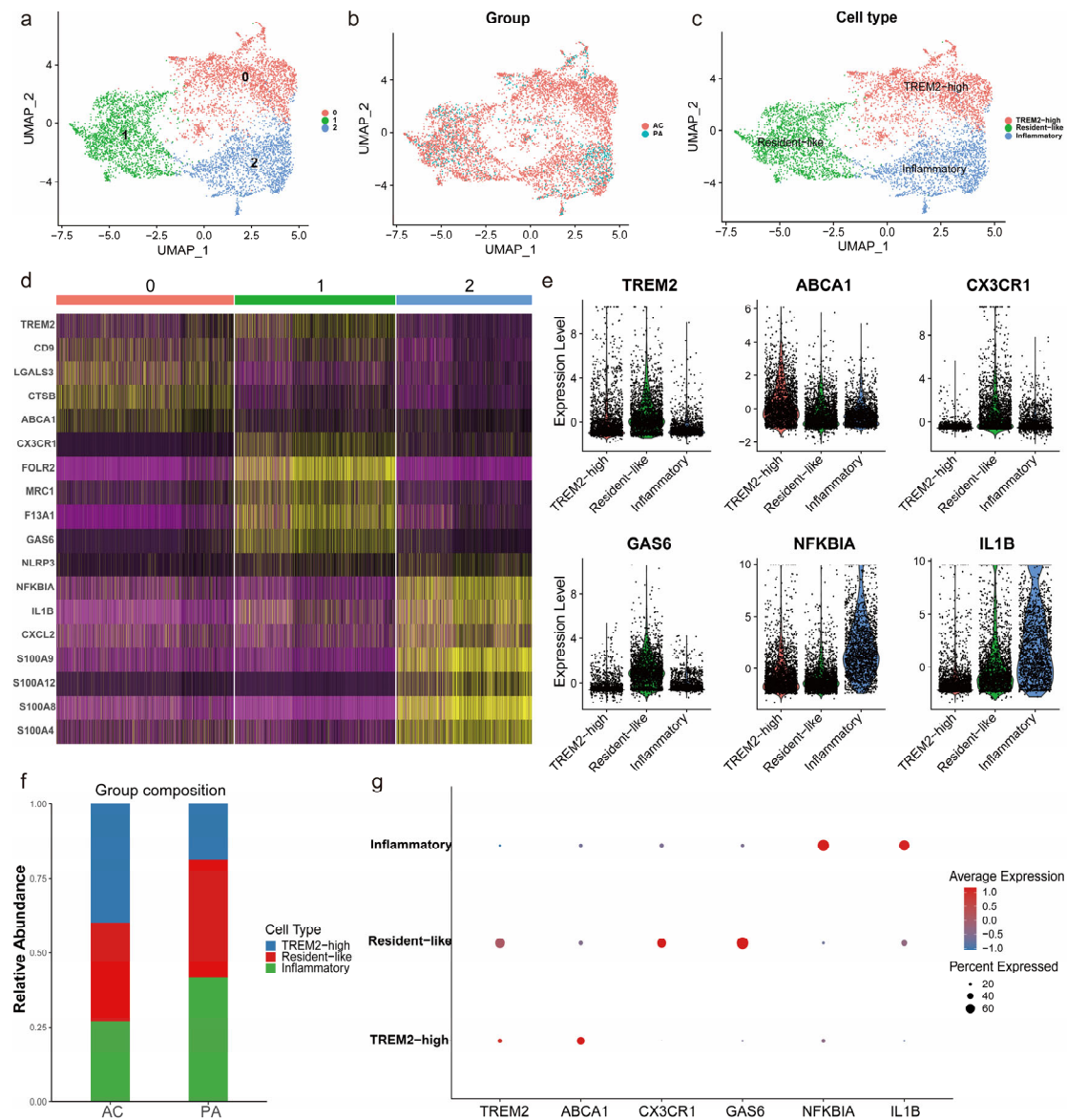
Supplementary Figure 3. Validation the identity of vascular smooth muscle cell (VSMC) and myeloid clusters. The intersection analysis of top 100 marker genes in (a) cluster 3, (b) cluster 4, (c) cluster 15, (d) cluster 5, (e) cluster 7, and (f) cluster 8 with top 100 marker genes in different cell type identified in Wirka's data. Wilcoxon signed-rank test: * $P < 0.05$.

Supplementary Figure 4



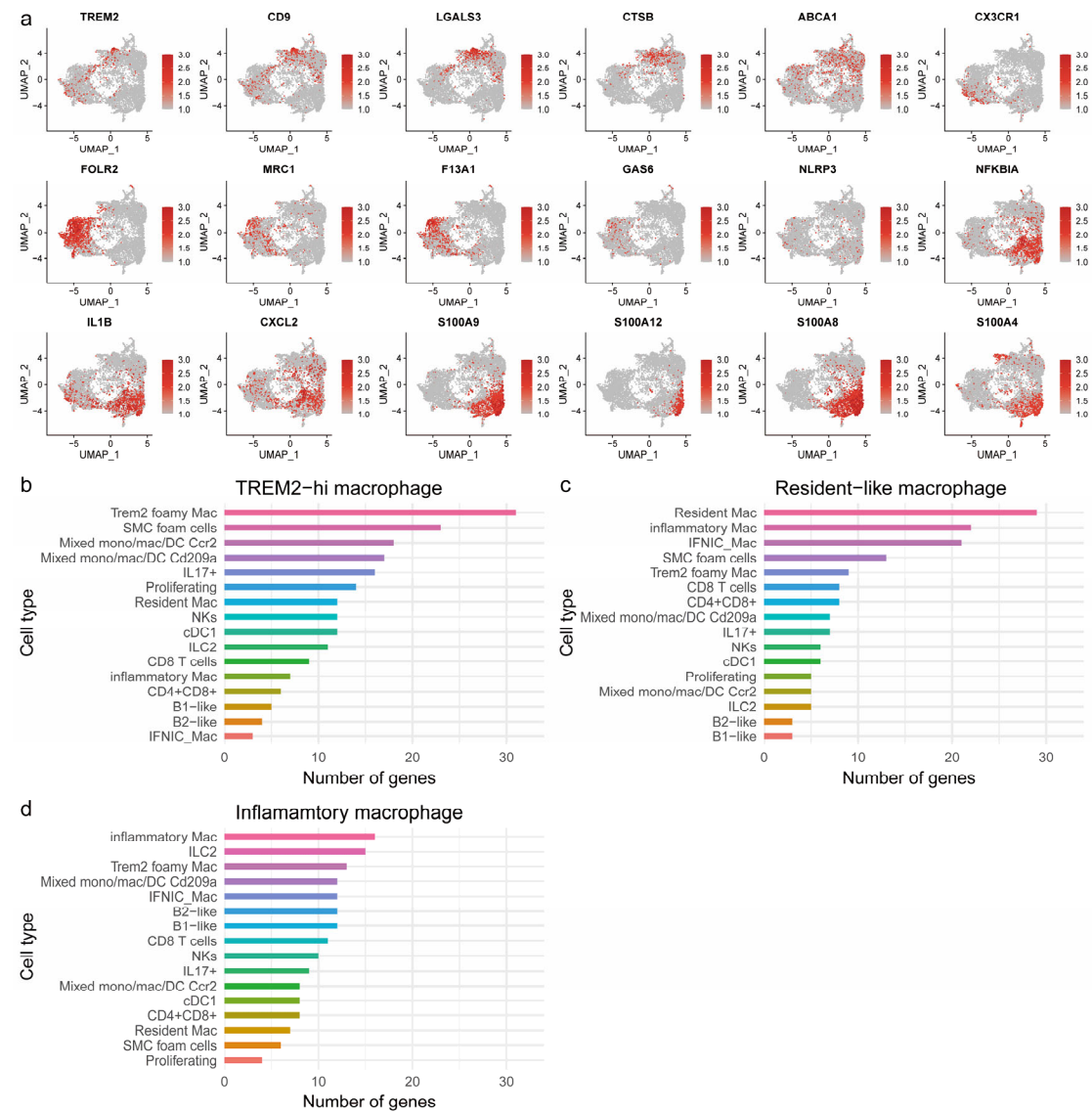
Supplementary Figure 4. Sub-clustering of vascular smooth muscle cells (VSMCs). **a**. Feature plots of cell marker genes among different VSMC subsets. **b**. The hallmarks of gene set enrichment analysis (GSEA) of VSMCs between proximal adjacent (PA) and atherosclerotic core (AC) group. Enrichment analysis of upregulated (**c**) and downregulated (**d**) genes of VSMCs in the AC group. **e**. Feature plots of *IGF-1* and *CDKN1A* among PA and AC group. **f**. Violin plots of *IGF-1*, *CDKN1A*, and *CDKN2B* in PA and AC group. Two-sample t test: *** $P < 0.001$, **** $P < 0.0001$.

Supplementary Figure 5



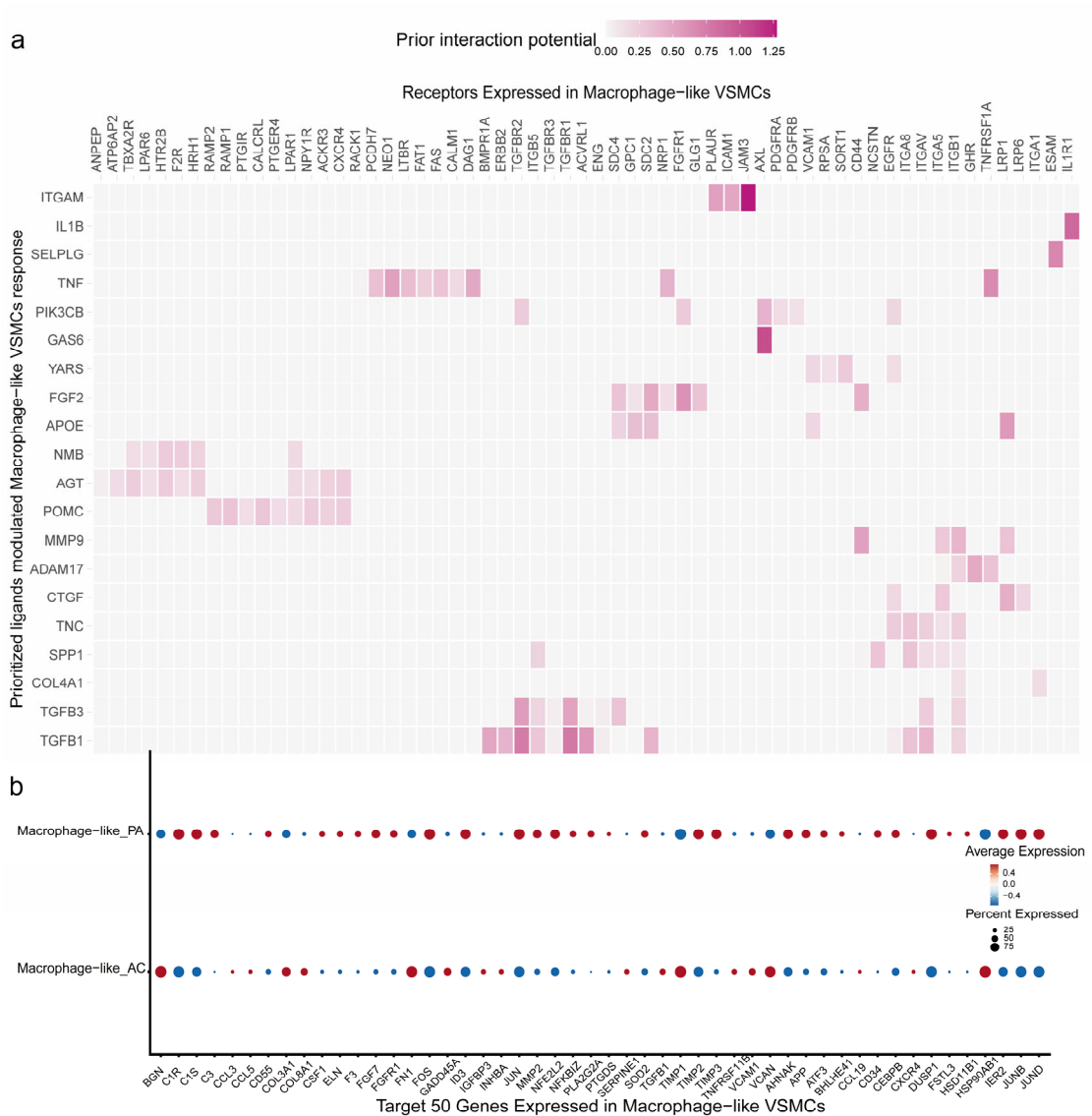
Supplementary Figure 5. Diversity of the myeloid cells in proximal adjacent (PA) and calcified atherosclerotic core (AC) portions of plaques. UMAP clustering plots revealing **(a)** 3 color-coded cell clusters, **(b)** different groups, and **(c)** 3 cell population of a total of 6694 individual cells based on gene expression. **d**. Heatmap of marker genes of different macrophage subsets per clusters. **e**. Violin plots of signature genes confirmed population identities. **f**. Bar chart of the relative frequency of myeloid cell subtypes in PA and AC groups. **g**. Dot plot shows the expression and percent expressed of cluster-identifying genes in myeloid cells.

Supplementary Figure 6



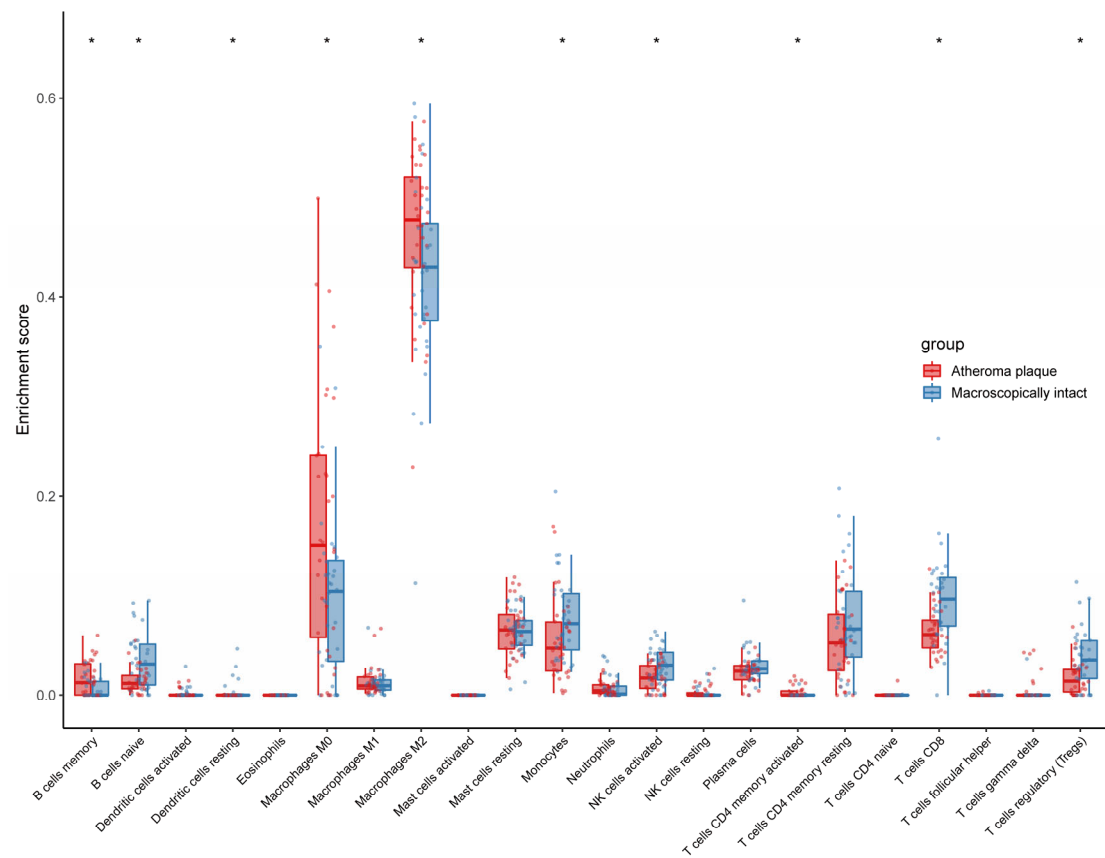
Supplementary Figure 6. Sub-clustering and validation of myeloid Subsets. **a**. Feature plots of cell marker genes of different myeloid subtypes among clusters. The intersection analysis of top 100 marker genes in **(b)** TREM2-hi macrophages, **(c)** Resident-like macrophages, and **(d)** Inflammatory macrophages with top 100 marker genes in different cell type identified in Zernecke's data

Supplementary Figure 7



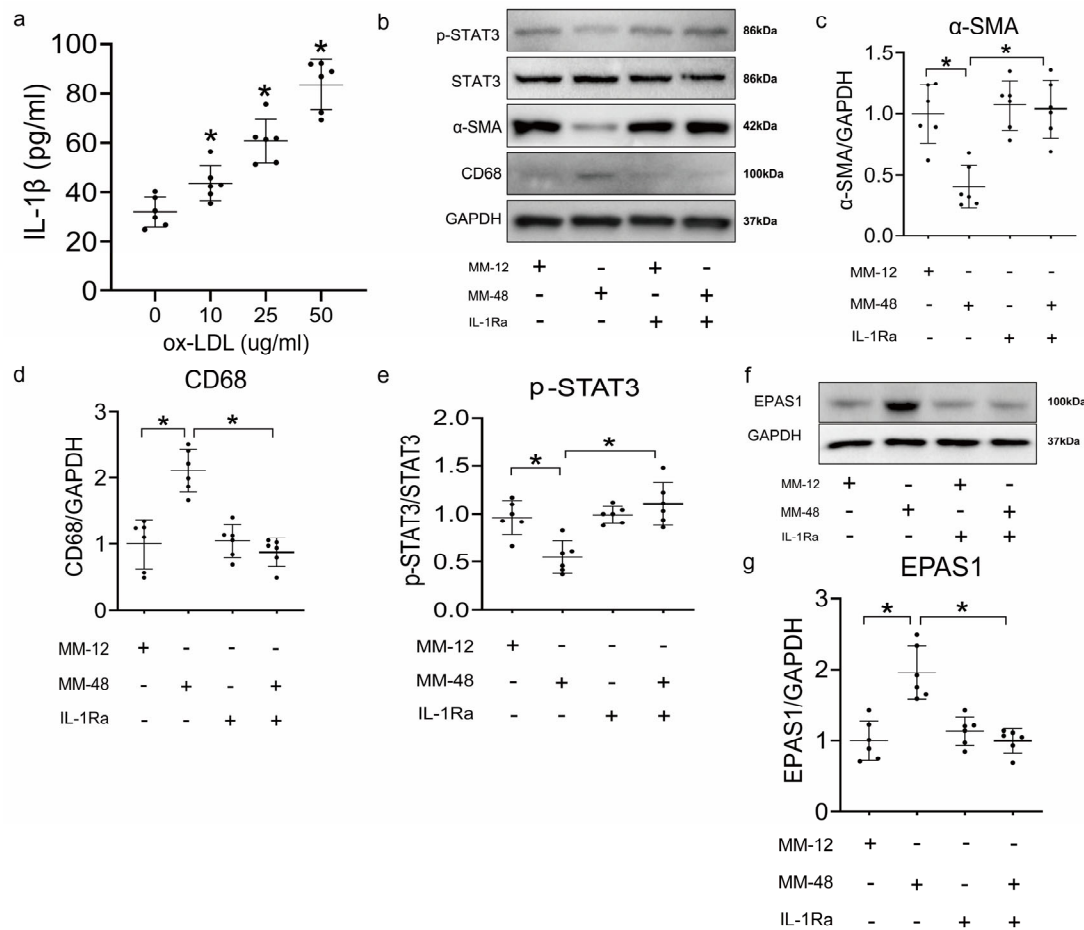
Supplementary Figure 7. NicheNet analysis of macrophages and macrophage-like vascular smooth muscle cell (VSMCs). **a**. Ligand-receptor heatmap of potential receptors expressed by macrophage-like VSMCs interacting with macrophage ligands. **b**. Dot plot confirming the identified target genes in macrophage-like VSMCs.

Supplementary Figure 8



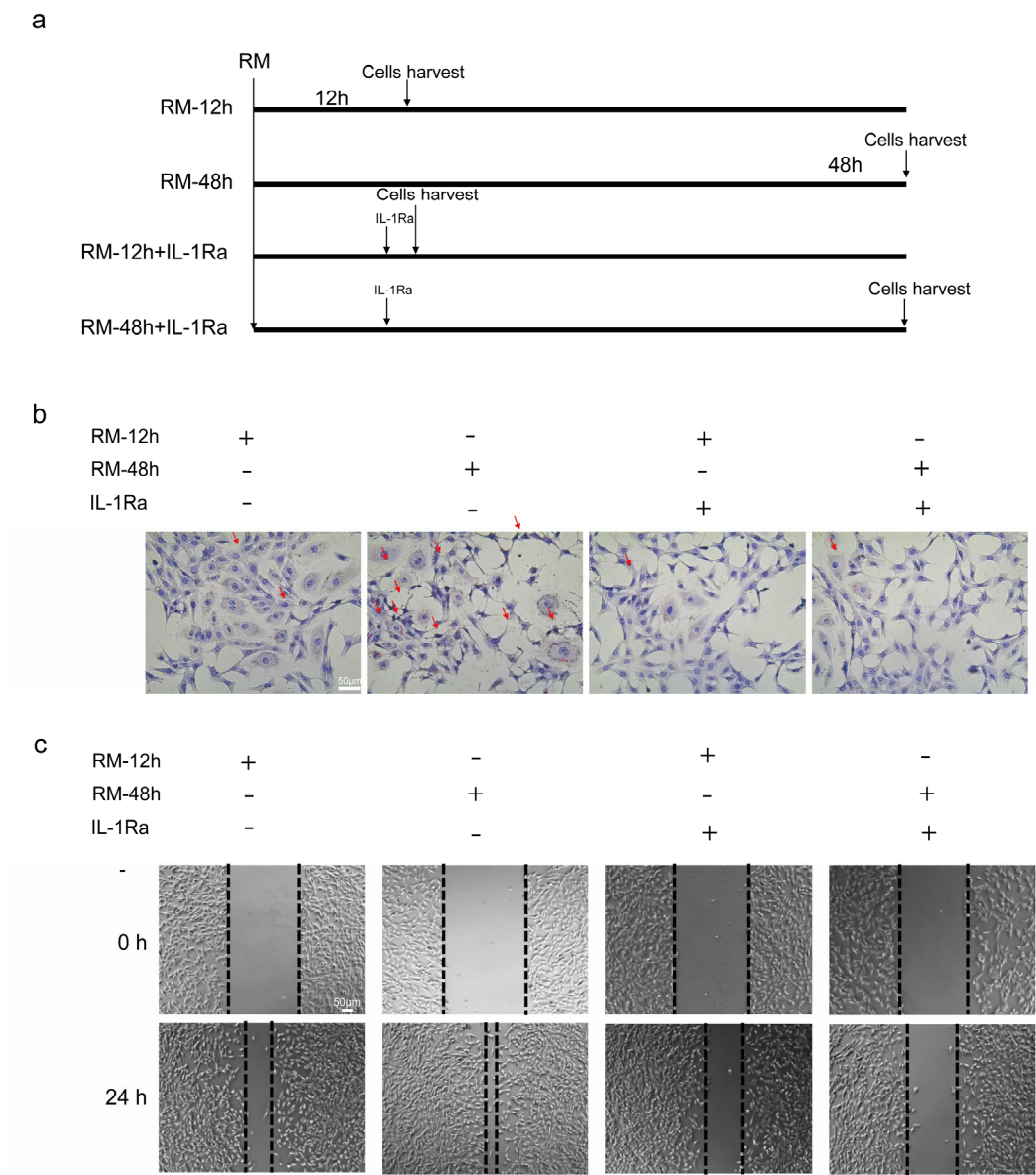
Supplementary Figure 8. The estimated proportions of immune cells of the atheroma plaque and macroscopically intact tissue group in GSE43292 using CIBERSORT analysis. Wilcoxon signed-rank test (paired): $*P < 0.05$.

Supplementary Figure 9



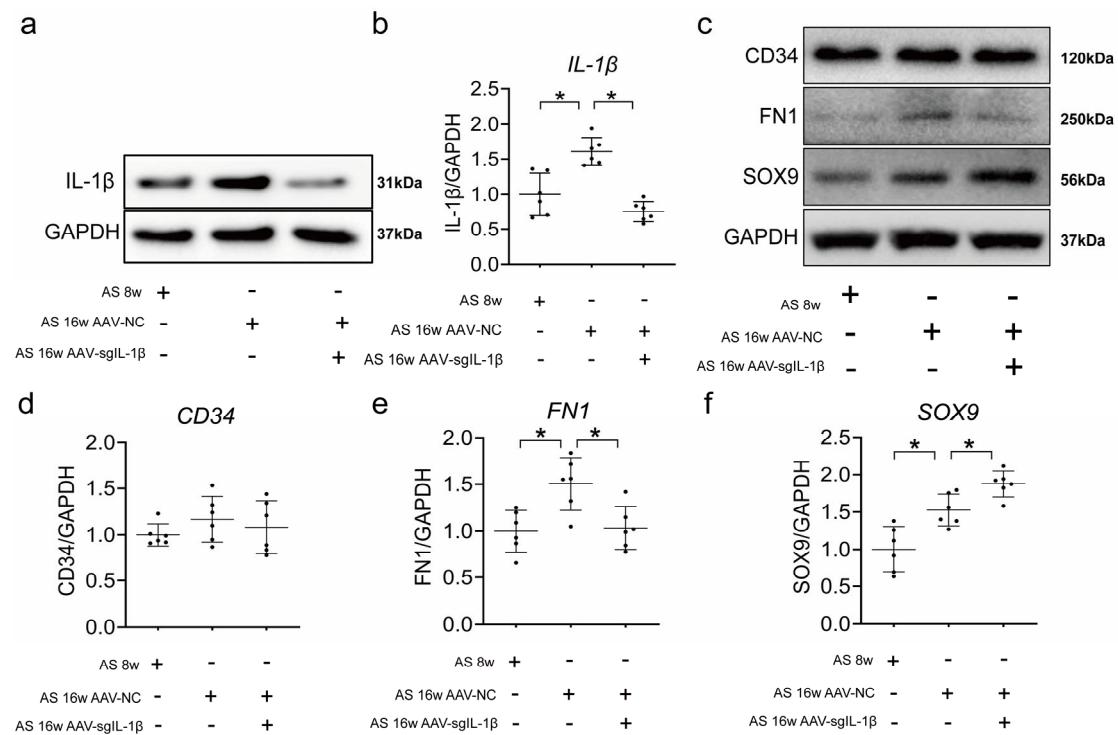
Supplementary Figure 9. IL-1 β /STAT3 axis involved in the crosstalk between primary macrophages and macrophage-like vascular smooth muscle cell (VSMCs). **a**. Enzyme-linked immunosorbent assay (ELISA) validates the increased secretion of IL-1 β in primary macrophage with ox-LDL treatment. **b**. Western blot assay indicates the expressions of VSMC marker (α -SMA), macrophage marker (CD68), and p-STAT3. The expression of (**c**) α -SMA, (**d**) CD68, and (**e**) p-STAT3 dysregulated by macrophage medium treatment can be reversed by interleukin-1 receptor antagonist (IL-1Ra). **f**. Western blot assay indicates the expressions of EPAS1. The expression of (**g**) EPAS1 dysregulated by macrophage medium treatment can be reversed by interleukin-1 receptor antagonist (IL-1Ra). N = 4-8 for each group in cell experiments as datapoints showing. Data are presented as mean $\pm$ SE. Mann-Whitney test: * P <0.05.

Supplementary Figure 10



Supplementary Figure 10. Functional experiments indicate IL-1 β contributes lipid accumulation and cell migration of macrophage-like vascular smooth muscle cell (VSMC). **a**. Schematic of RAW264.7 medium (RM) and interleukin-1 receptor antagonist (IL-1Ra) treatment in functional experiments. **b**. Representative images of Oil red O staining in macrophage-like VSMCs. **c**. Representative images of migration rates of macrophage-like VSMCs through wound healing assay.

Supplementary Figure 11



Supplementary Figure 11. *In vivo* experiments identify the correlations of IL-1 β with other SMC subsets markers/transcription factors in aorta of mice. **a**. Western blot assays illustrate the effect of adeno-associated virus-sgIL-1 β (AAV-sgIL-1 β) on the expression of IL-1 β *in vivo*. Quantifications of **(b)** IL-1 β in aorta of mice from each group. **c**. Western blot assays illustrate the effect of adeno-associated virus-sgIL-1 β (AAV-sgIL-1 β) on the expression of other SMC subsets transcription factors *in vivo*. Quantifications of **(d)** CD34, **(e)** FN1, **(f)** SOX9 in aorta of mice from each group. Eighteen ApoE^{-/-} mice were randomly grouped into three groups, including high-fat diet (HFD) treated 8 weeks (n=6), 16 weeks (n=6), and AAV-sgIL-1 β (n=6) mice. Data are presented as mean $\pm$ SE. Mann-Whitney test: * P <0.05.

2. original blots

Fig.7 a

1. oxLDL 0 µg/ml

2. oxLDL 10 µg/m

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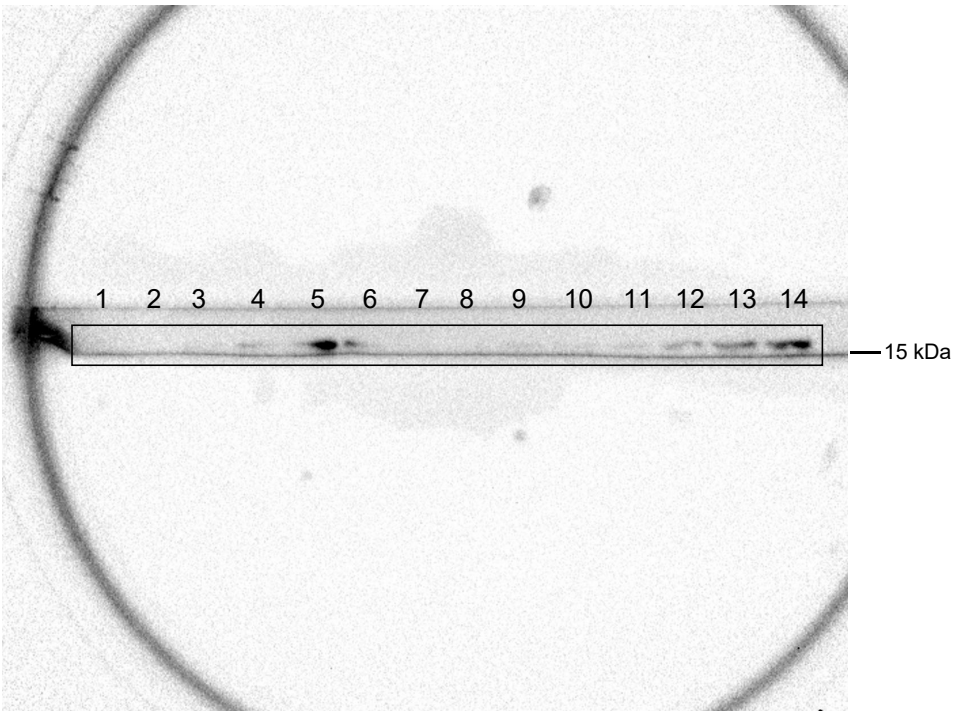
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40. oxLDL 75 µg/m

41. oxLDL 100 µg/m

42. oxLDL 125 µg/ml

IL-1β



GAPDH

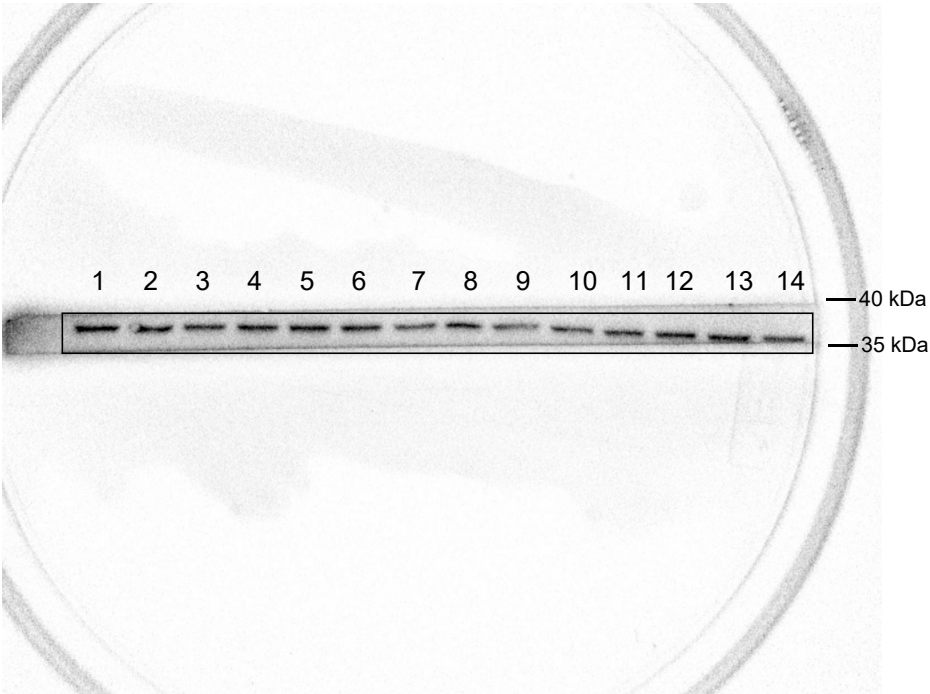


Fig.7 a

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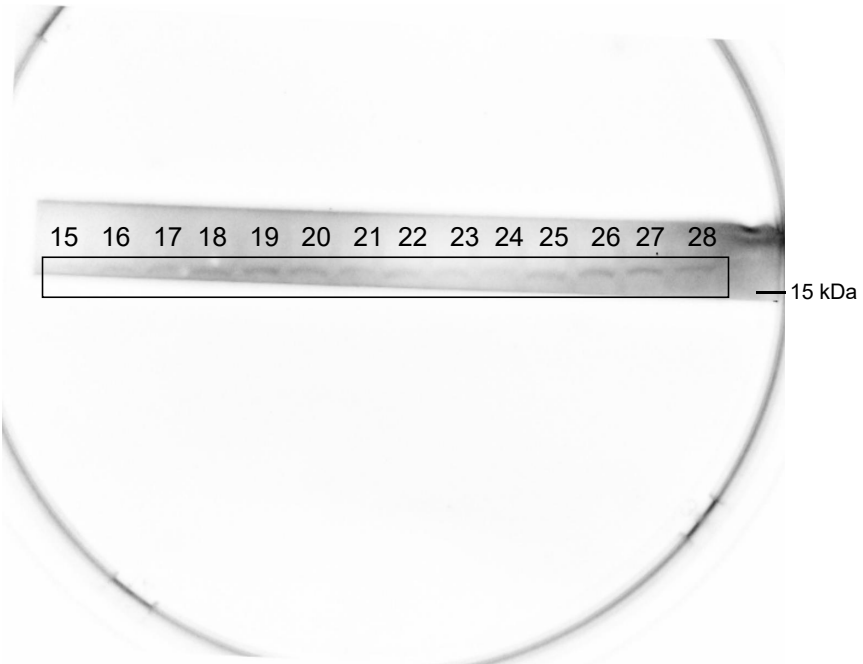
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IL-1β



GAPDH

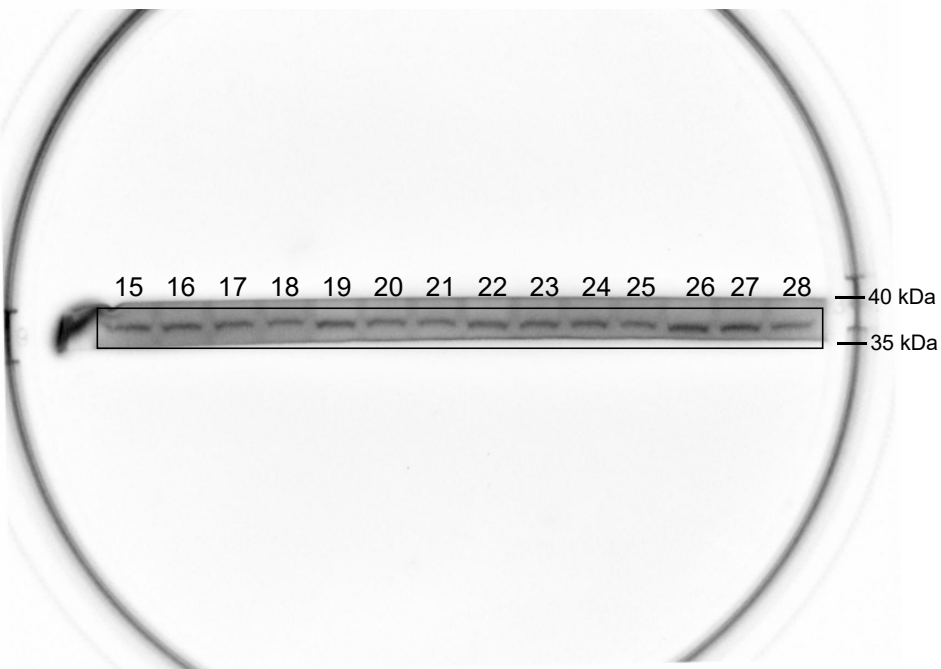


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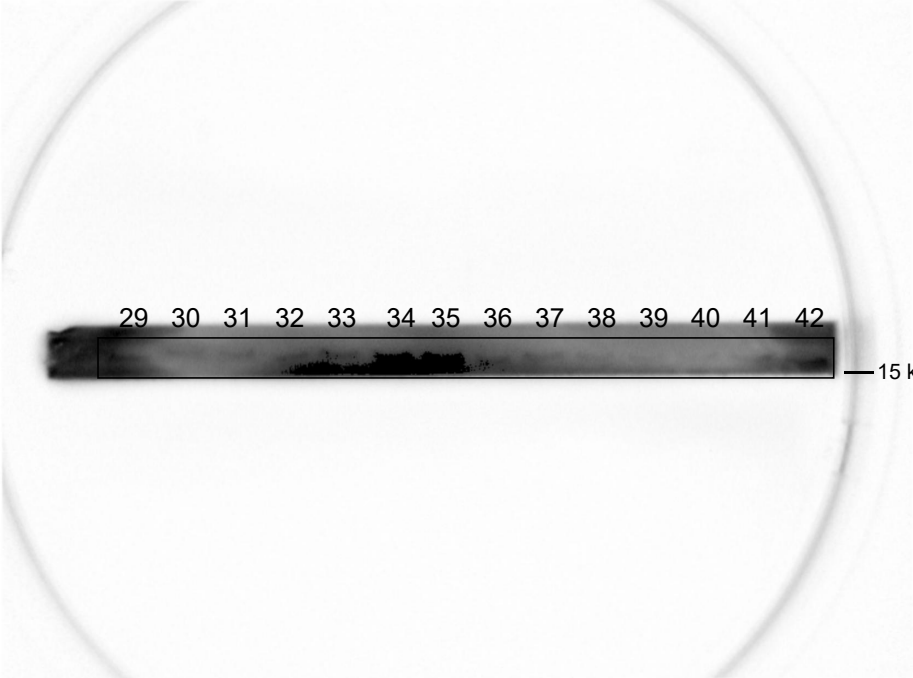
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IL-1β



GAPDH

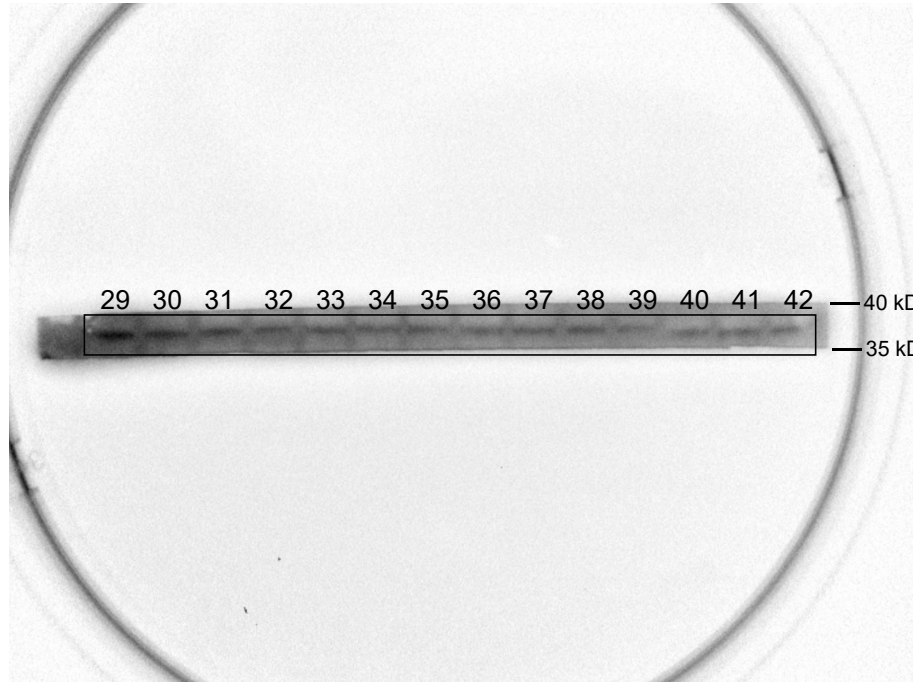
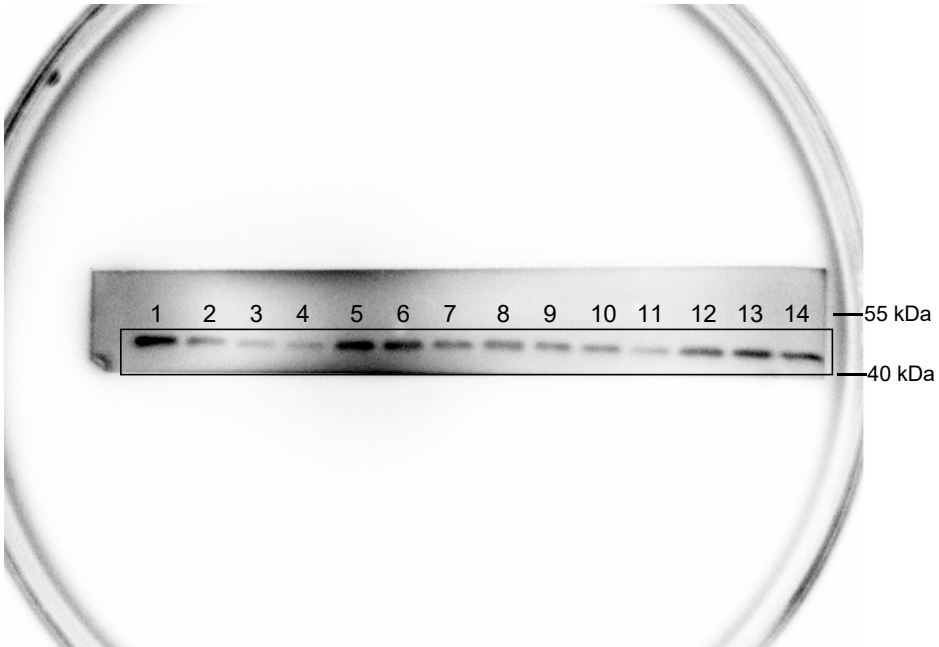


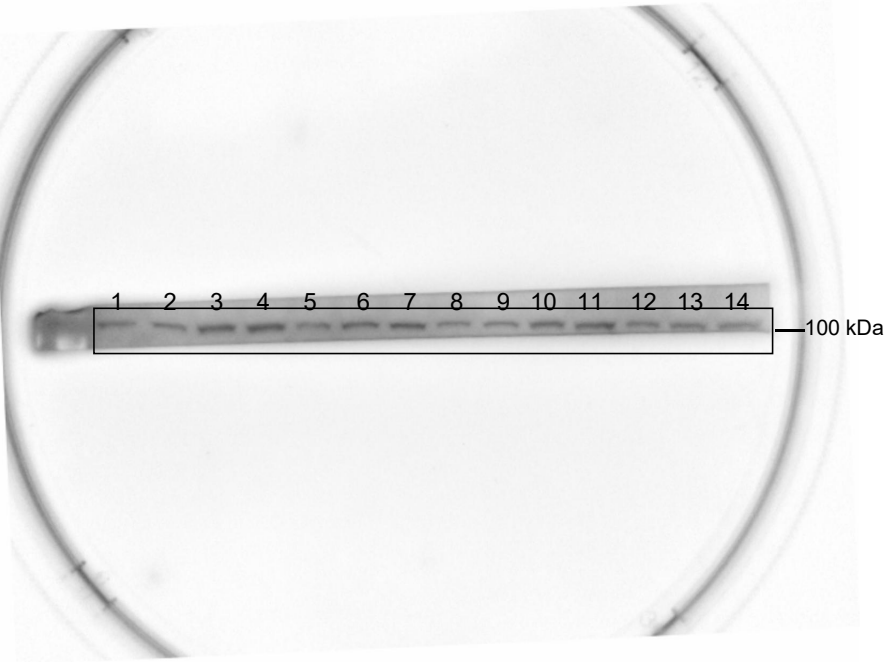
Fig.7 c

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α -SMA



CD68



GAPDH

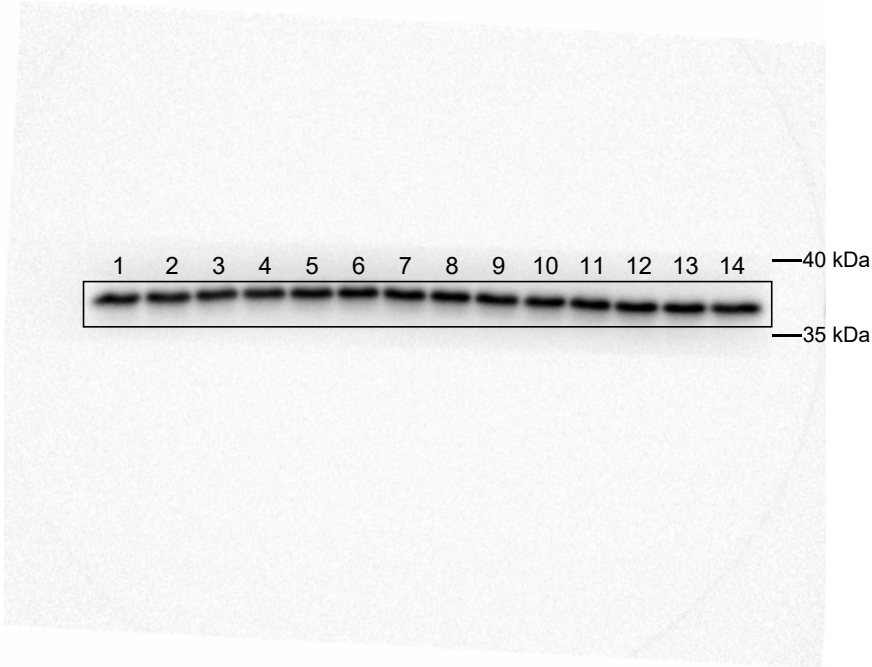
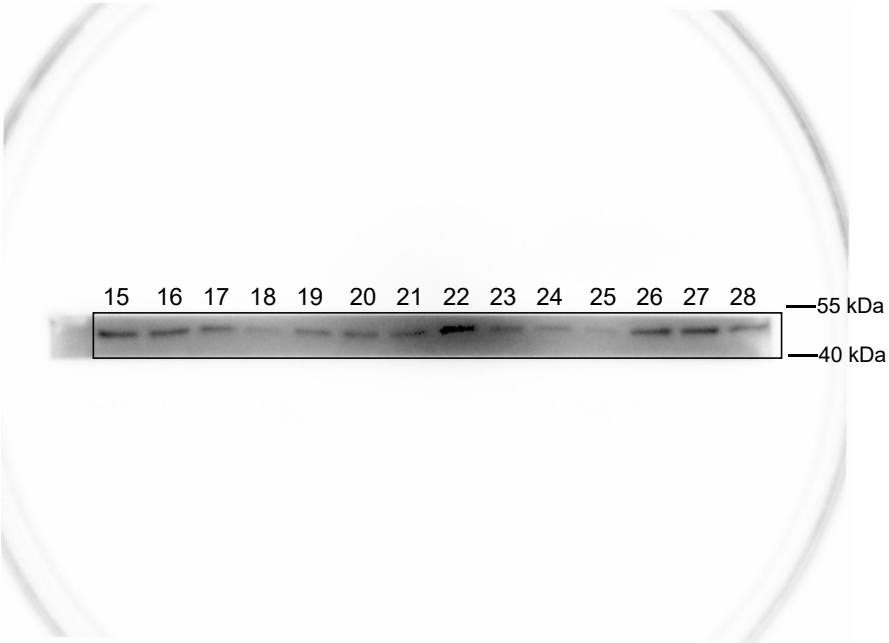


Fig.7 c

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- 28. RM 48h

α -SMA



CD68



GAPDH

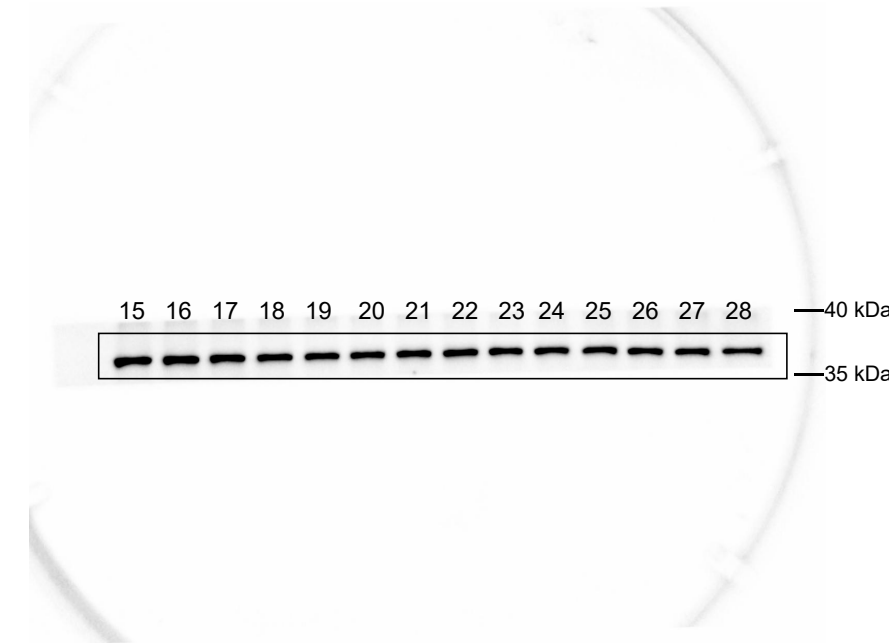
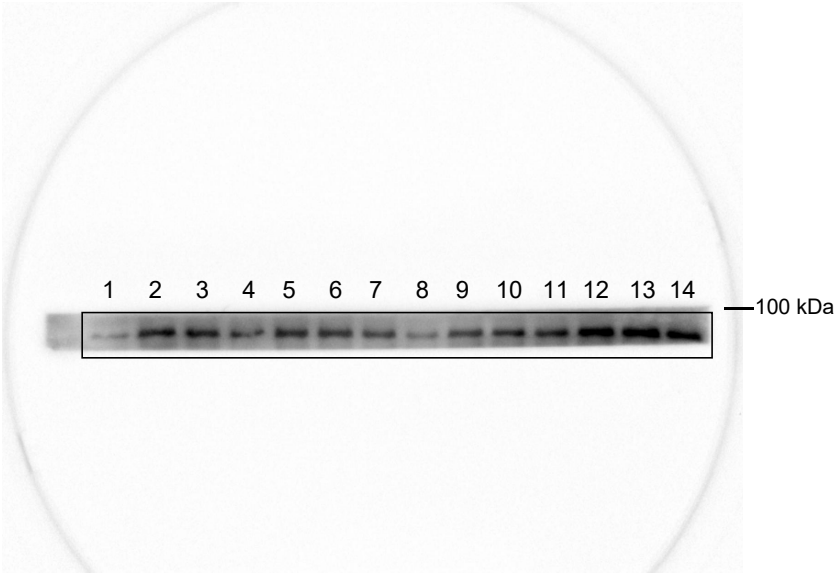


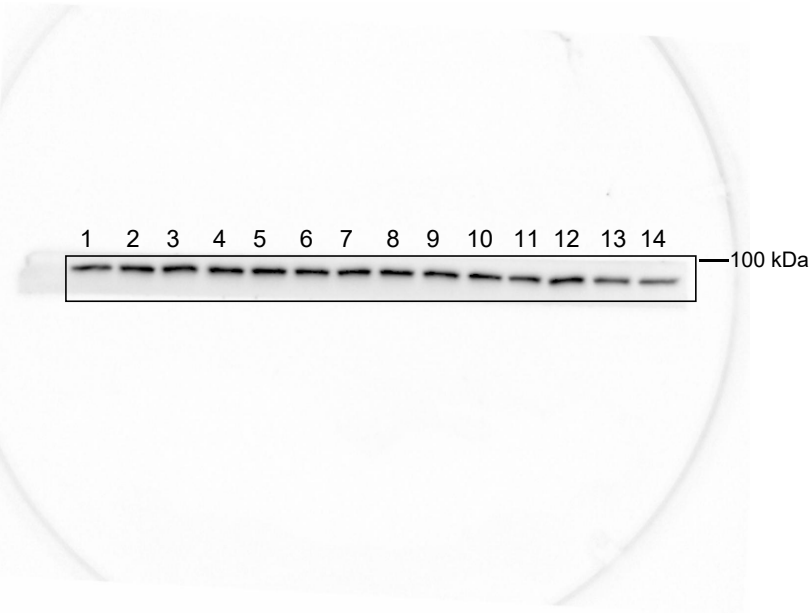
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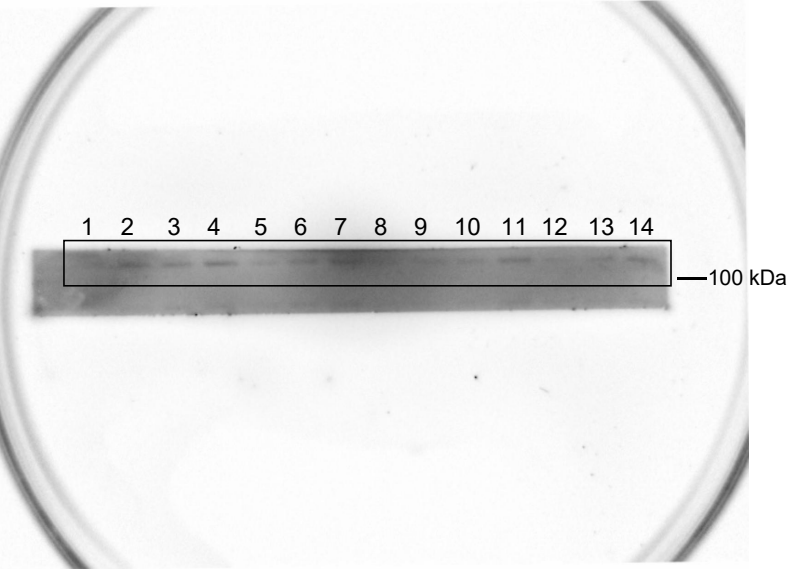
p-STAT3



STAT3



EPAS1



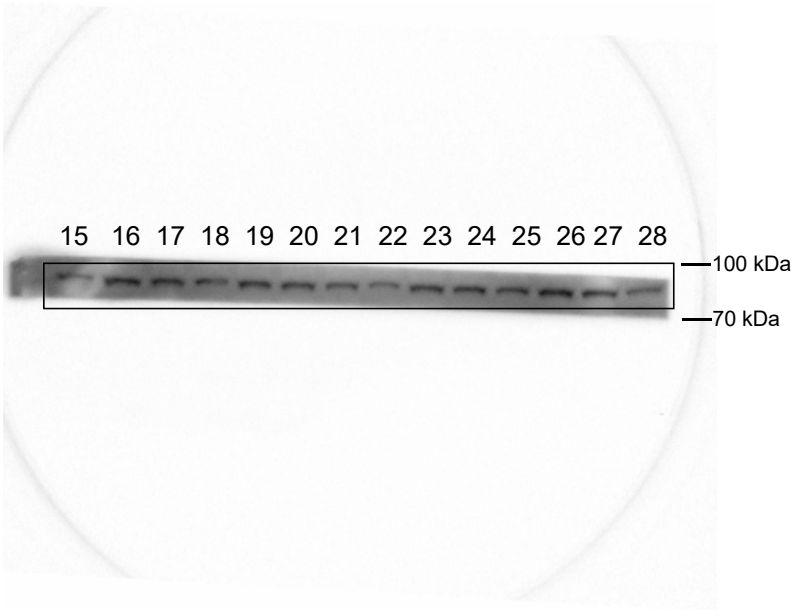
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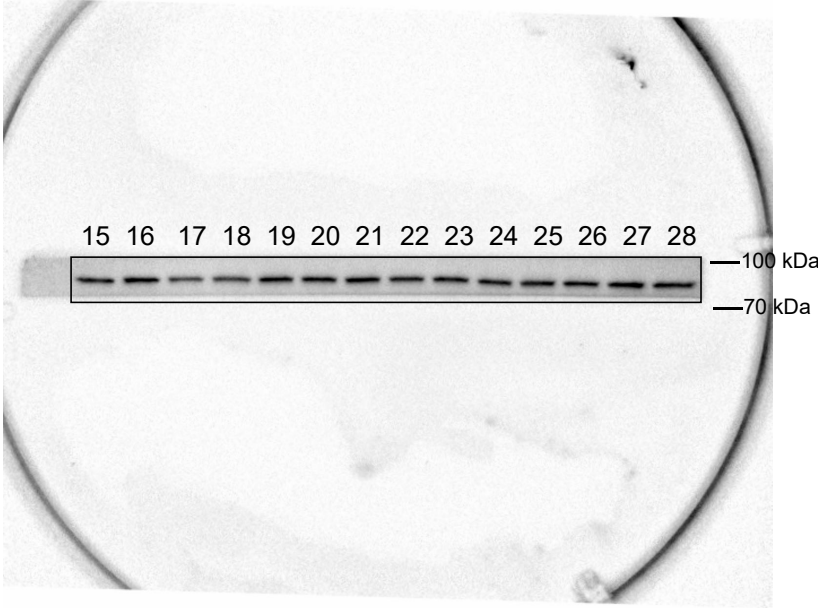
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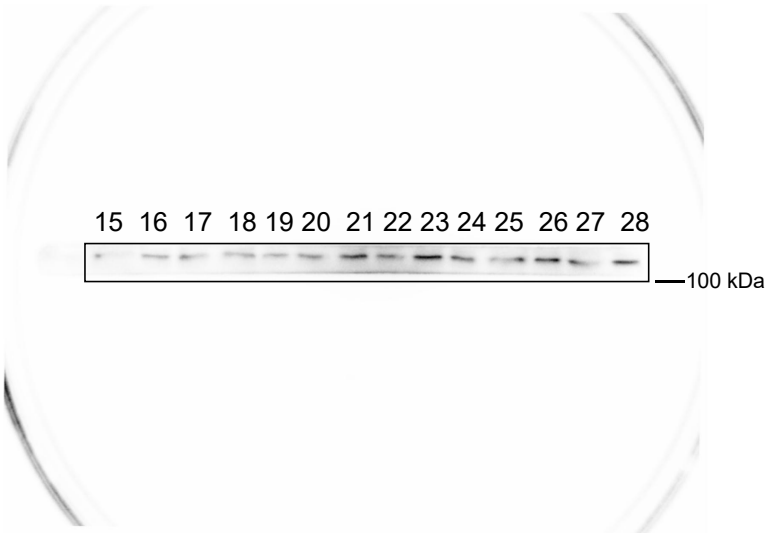
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STAT3



EPAS1



GAPDH

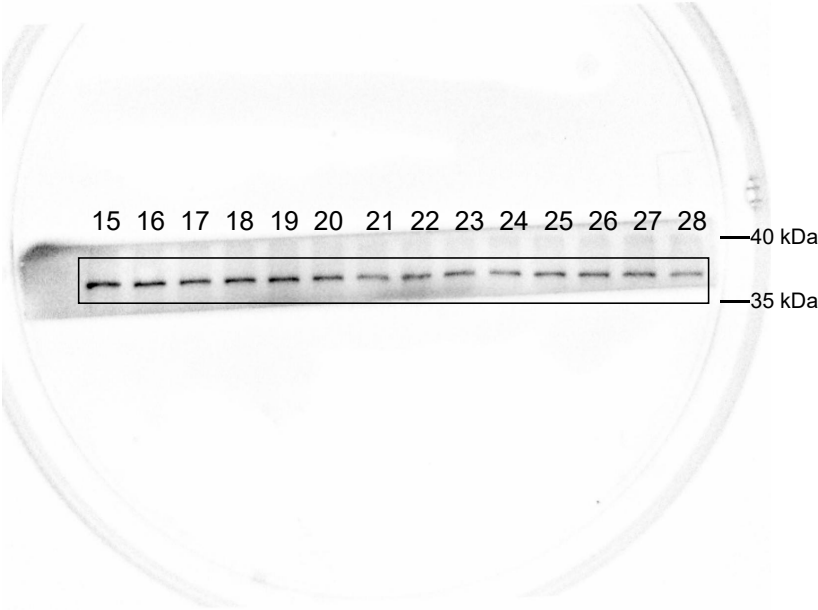
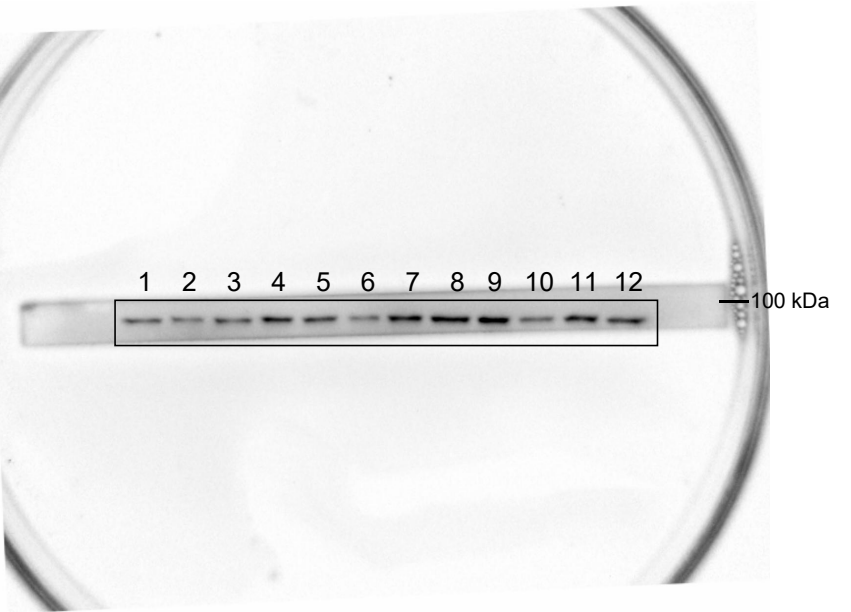


Fig.7 e

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- 4. RM 48h+IL-1Ra
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- 7. RM 12h+IL-1Ra
- 8. RM 48h+IL-1Ra
- 9. RM 12h
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- 24. RM 48h+IL-1Ra

p-STAT3



STAT3

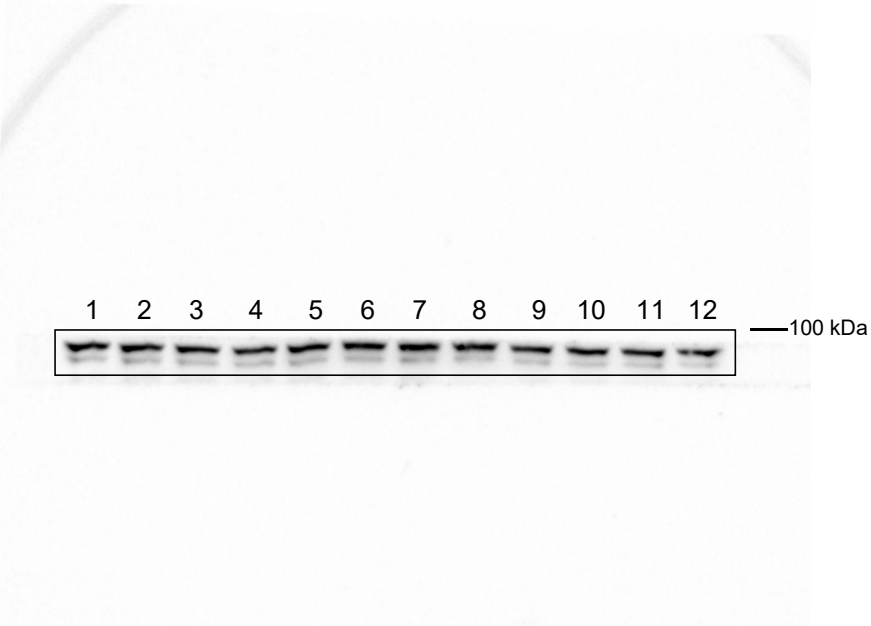
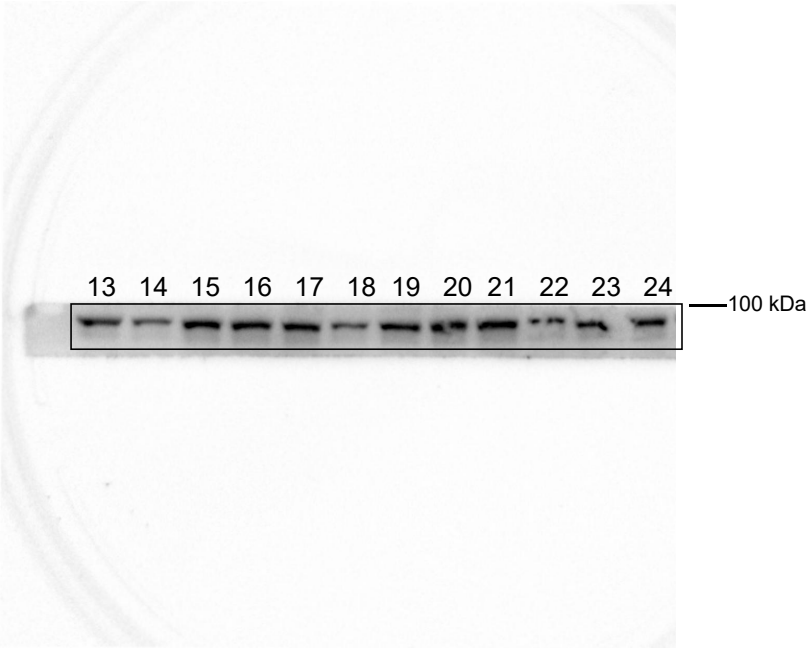


Fig.7 e

- 1. RM 12h
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- 4. RM 48h+IL-1Ra
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- 7. RM 12h+IL-1Ra
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p-STAT3



STAT3

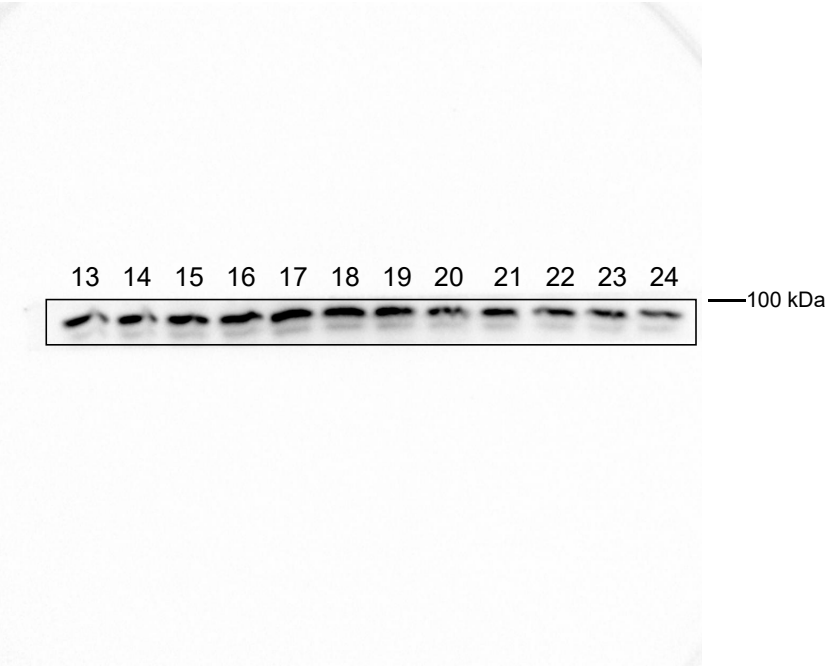
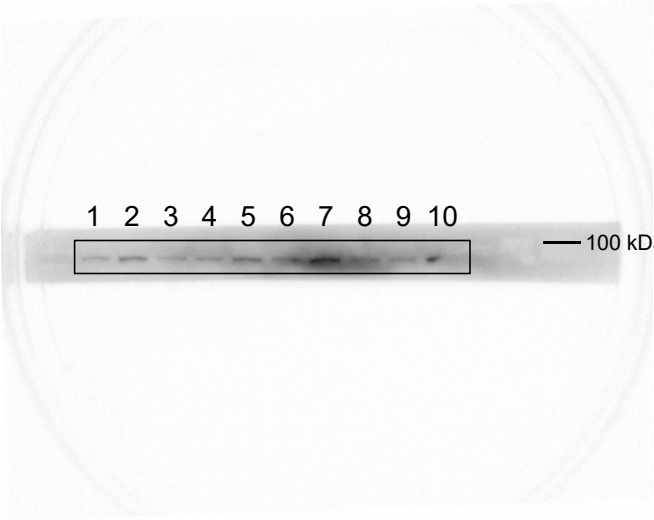


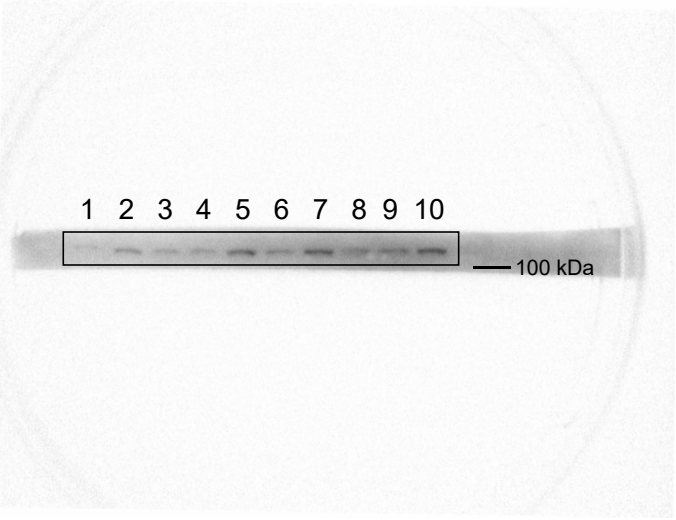
Fig.7 f

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- 3. RM 48h+IL-1Ra
- 4. RM 48h+Colivelin
- 5. RM 48h+IL-1Ra+Stattic
- 6. RM 12h
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- 9. RM 48h+Colivelin
- 10. RM 48h+IL-1Ra+Stattic

ICAM-1



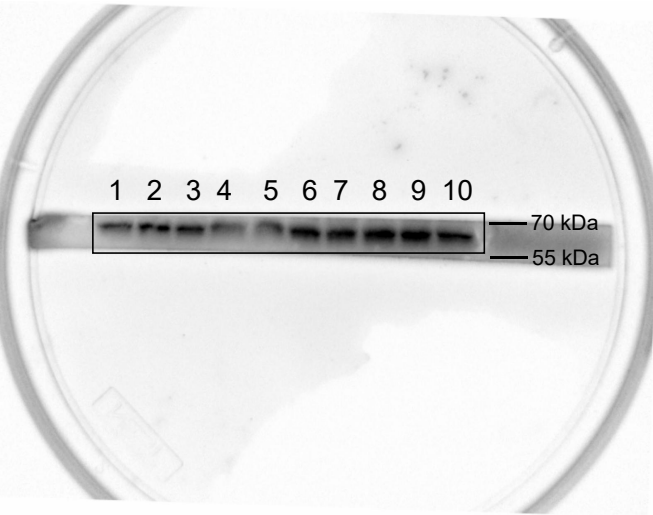
VCAM-1



p-p65



p65



MCP-1



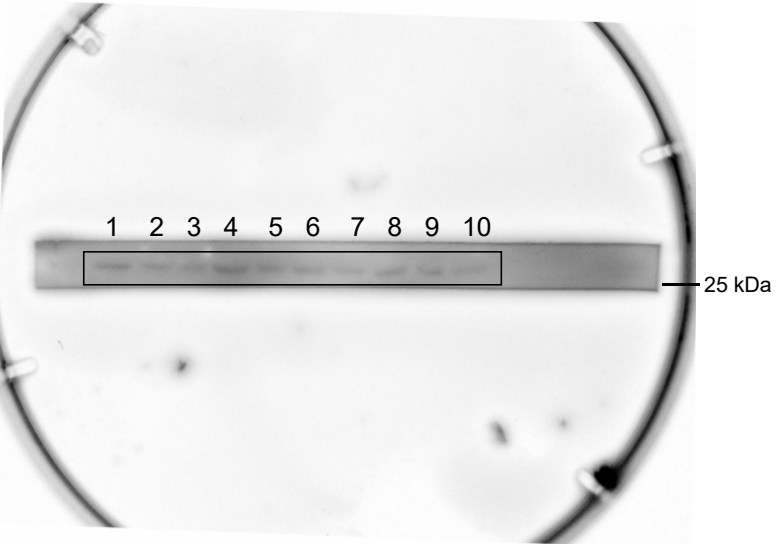
Fig.7 f

- 1. RM 12h
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- 4. RM 48h+Colivelin
- 5. RM 48h+IL-1Ra+Stattic
- 6. RM 12h
- 7. RM 48h
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- 10. RM 48h+IL-1Ra+Stattic

Bax



Bcl-2



Caspase-3



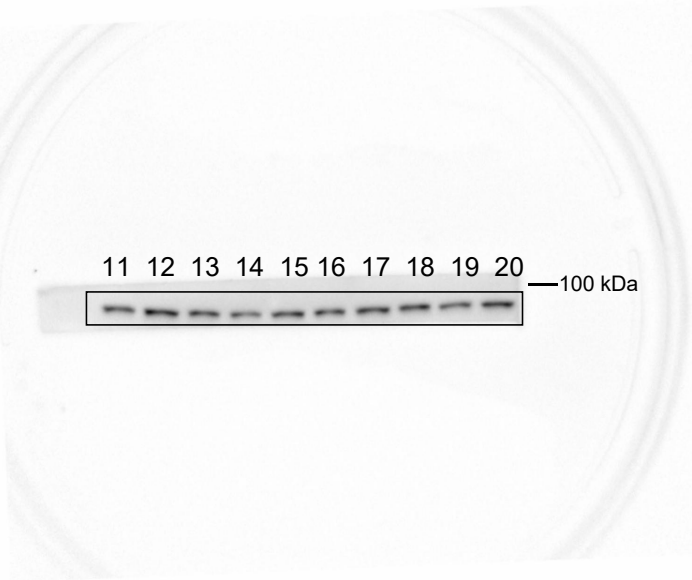
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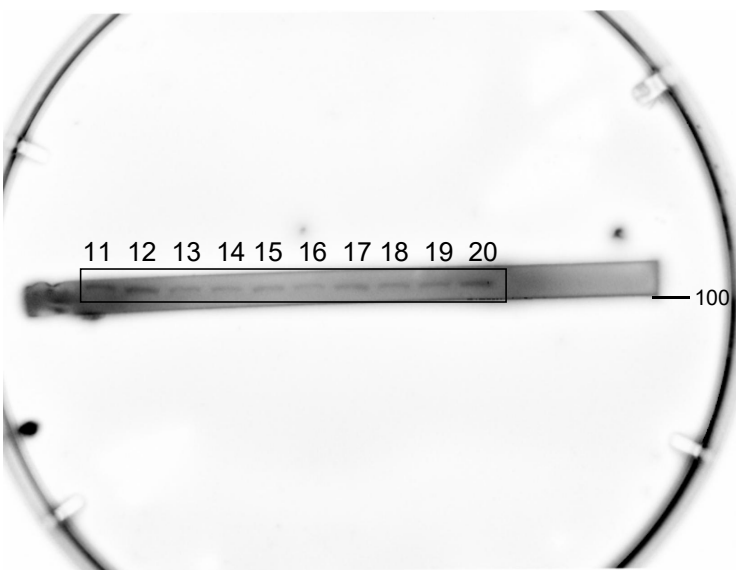
Fig.7 f

- 11. RM 12h
- 12. RM 48h
- 13. RM 48h+IL-1Ra
- 14. RM 48h+Colivelin
- 15. RM 48h+IL-1Ra+Stattic
- 16. RM 12h
- 17. RM 48h
- 18. RM 48h+IL-1Ra
- 19. RM 48h+Colivelin
- 20. RM 48h+IL-1Ra+Stattic

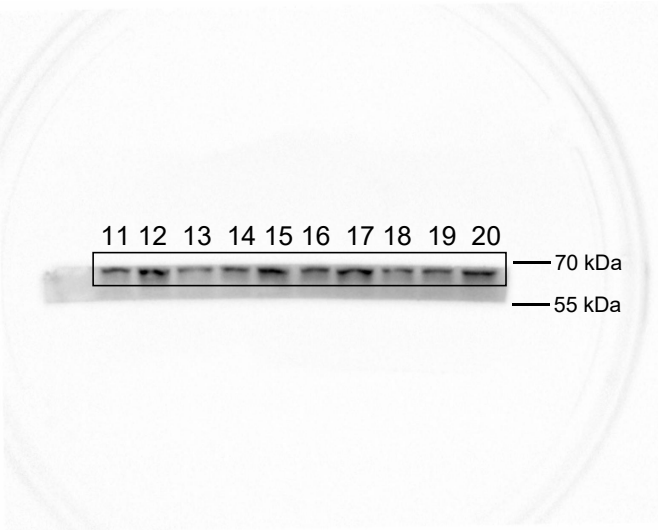
ICAM-1



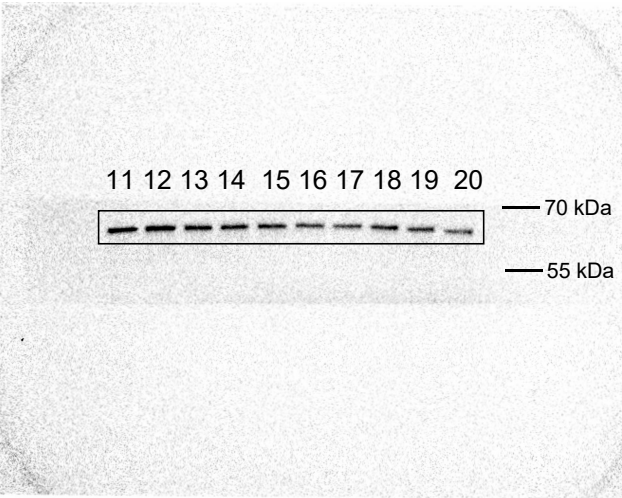
VCAM-1



p-p65



p65



MCP-1

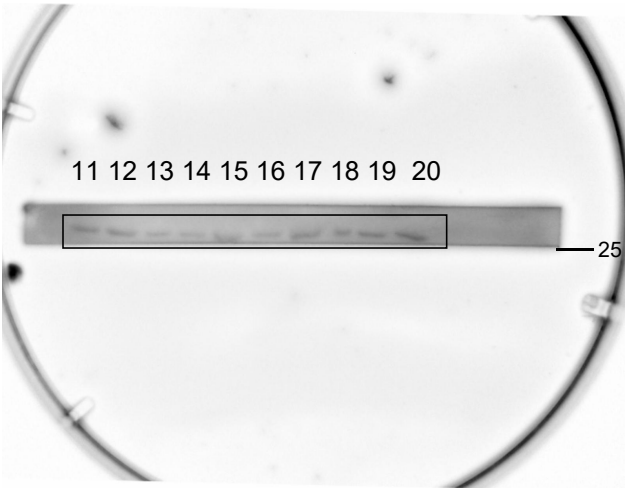
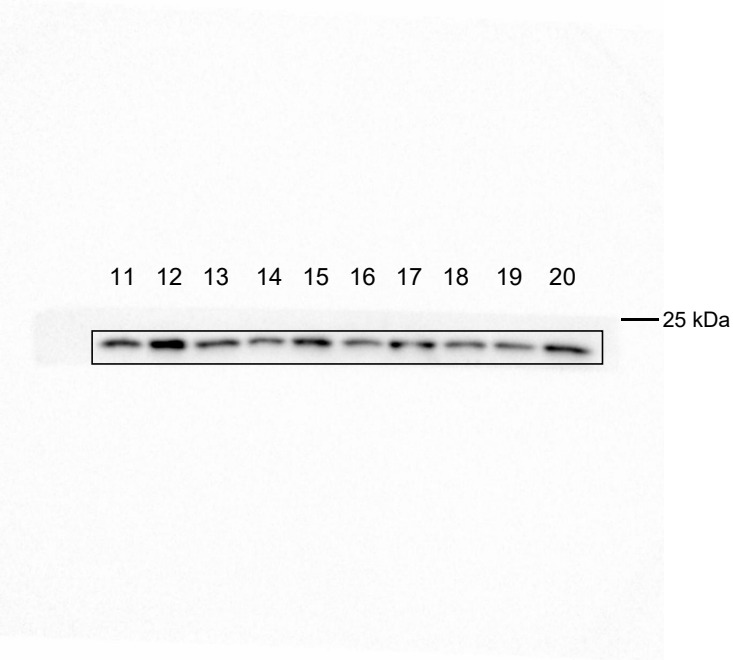


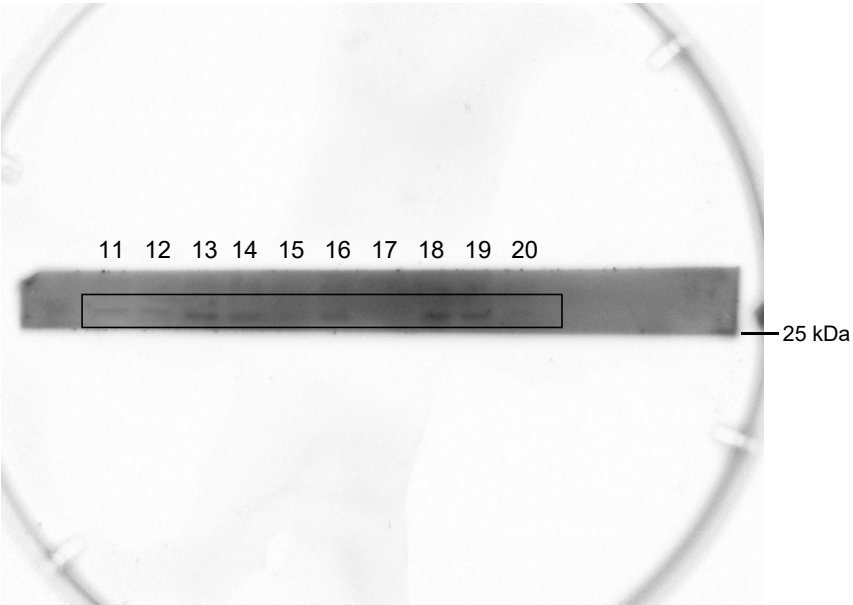
Fig.7 f

- 11. RM 12h
- 12. RM 48h
- 13. RM 48h+IL-1Ra
- 14. RM 48h+Colivelin
- 15. RM 48h+IL-1Ra+Stattic
- 16. RM 12h
- 17. RM 48h
- 18. RM 48h+IL-1Ra
- 19. RM 48h+Colivelin
- 20. RM 48h+IL-1Ra+Stattic

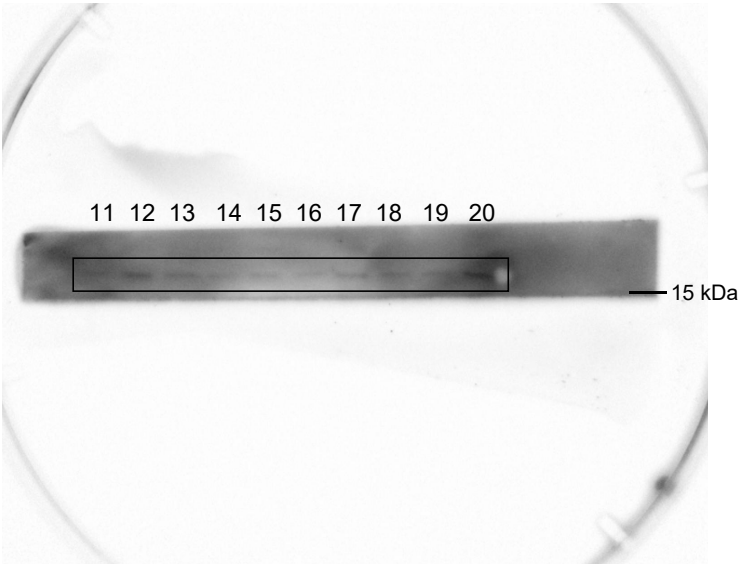
Bax



Bcl-2



Caspase-3



GAPDH

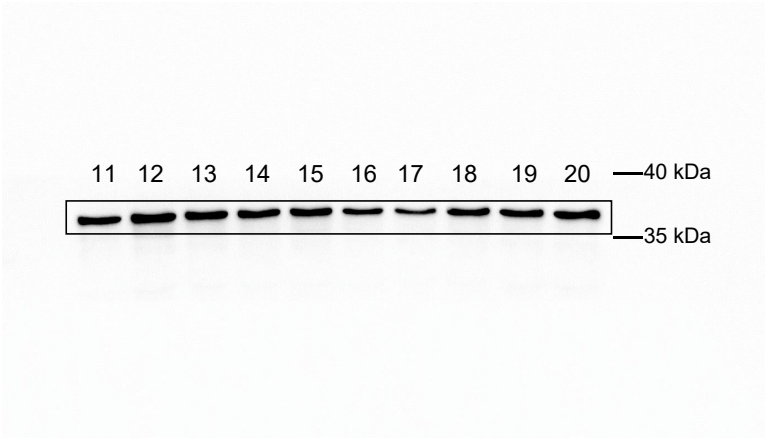
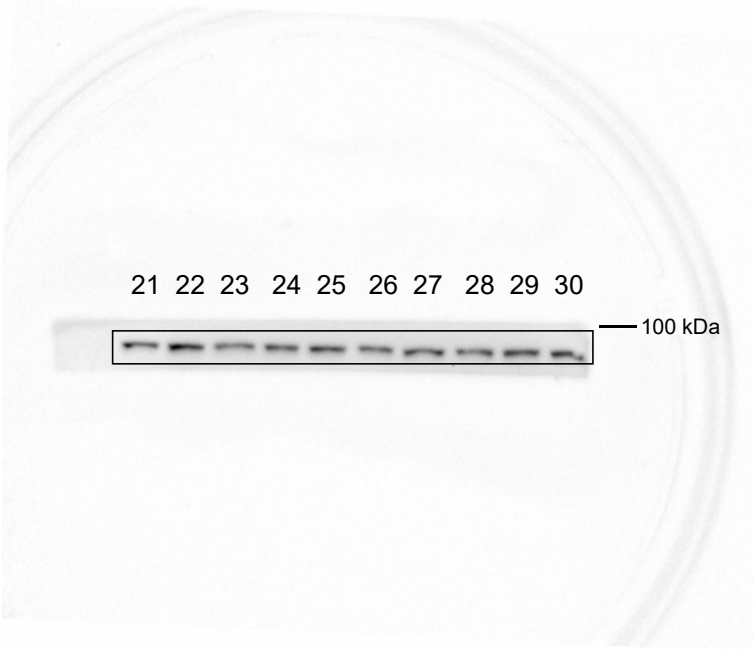


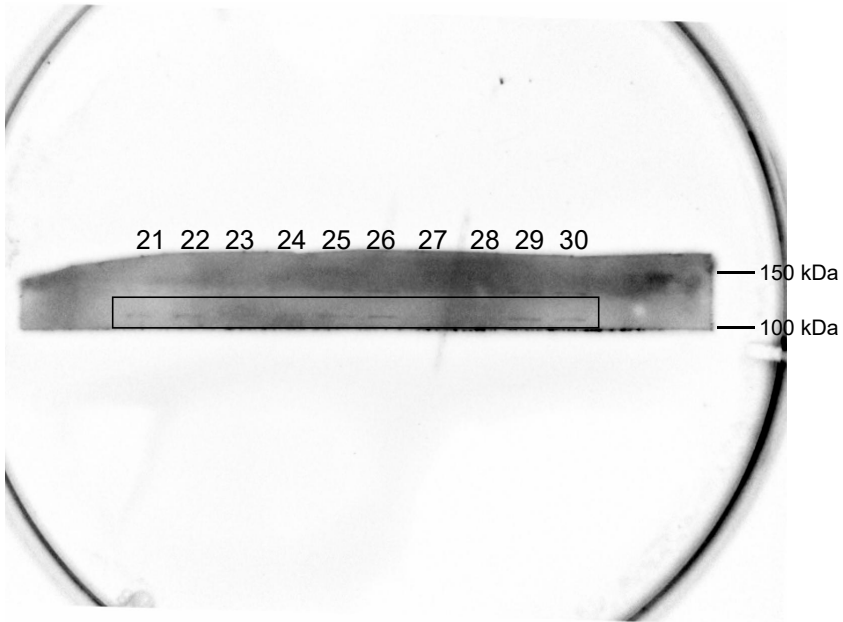
Fig.7 f

- 21. RM 12h
- 22. RM 48h
- 23. RM 48h+IL-1Ra
- 24. RM 48h+Colivelin
- 25. RM 48h+IL-1Ra+Stattic
- 26. RM 12h
- 27. RM 48h
- 28. RM 48h+IL-1Ra
- 29. RM 48h+Colivelin
- 30. RM 48h+IL-1Ra+Stattic

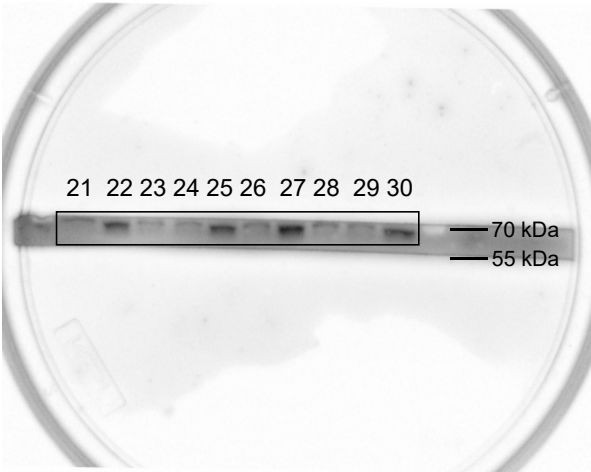
ICAM-1



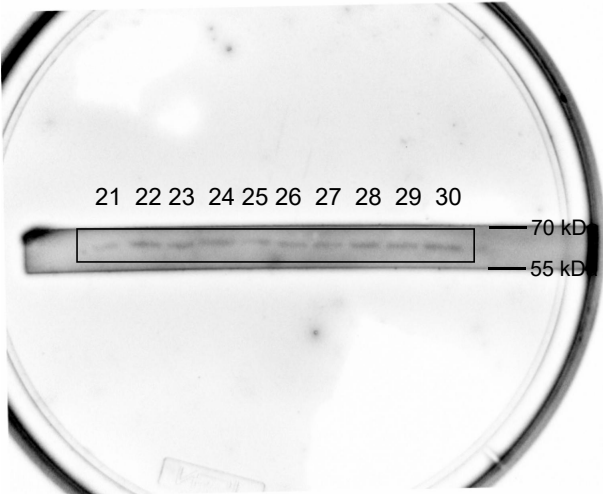
VCAM-1



p-p65



p65



MCP-1

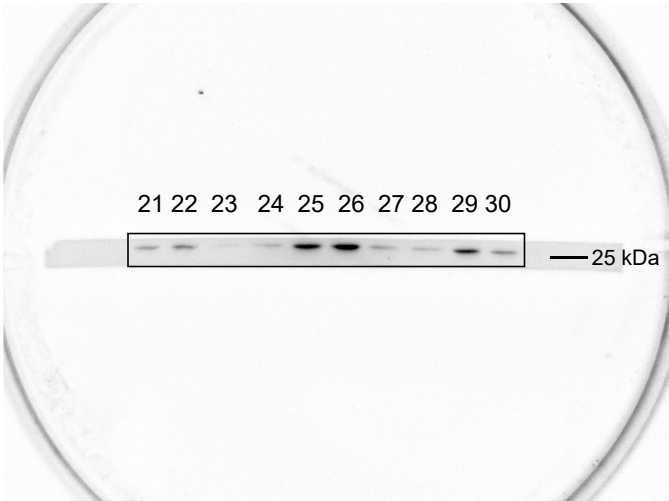
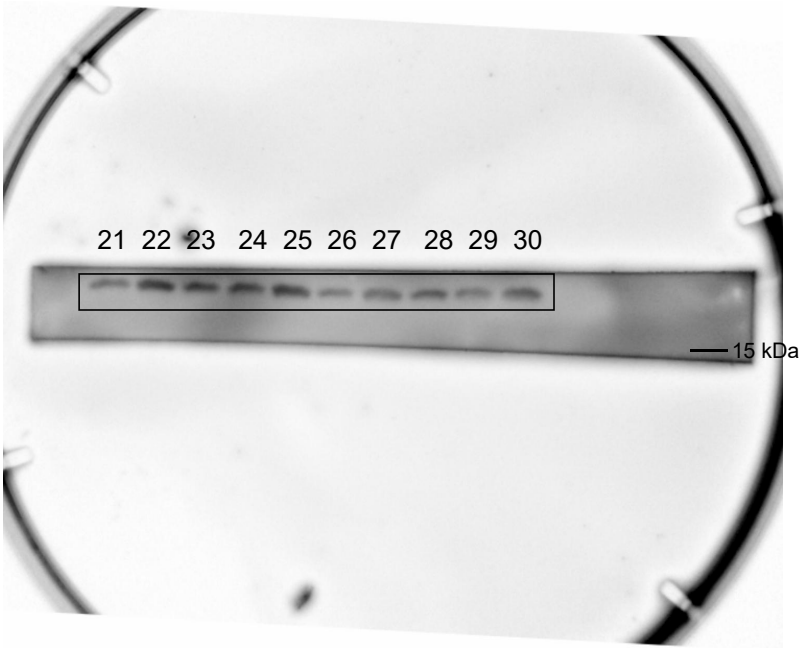


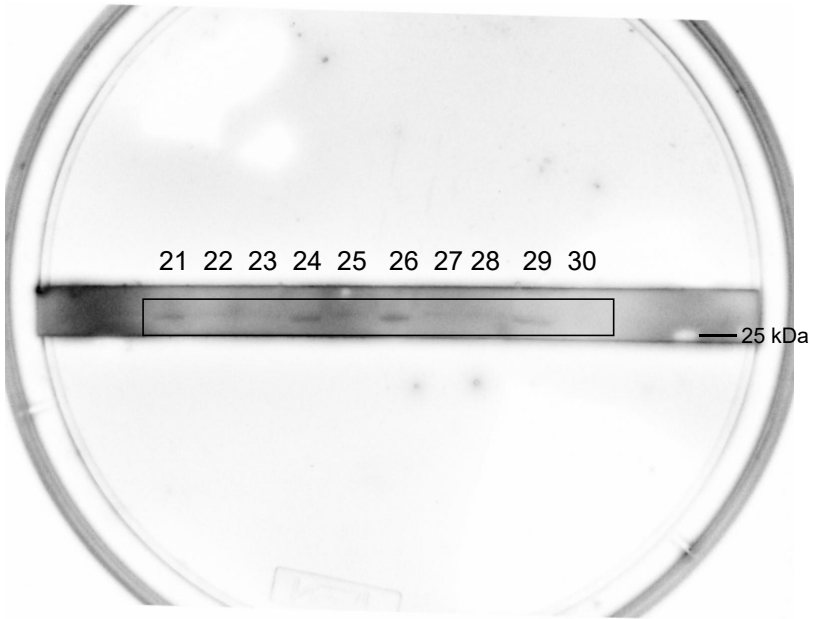
Fig.7 f

- 21. RM 12h
- 22. RM 48h
- 23. RM 48h+IL-1Ra
- 24. RM 48h+Colivelin
- 25. RM 48h+IL-1Ra+Stattic
- 26. RM 12h
- 27. RM 48h
- 28. RM 48h+IL-1Ra
- 29. RM 48h+Colivelin
- 30. RM 48h+IL-1Ra+Stattic

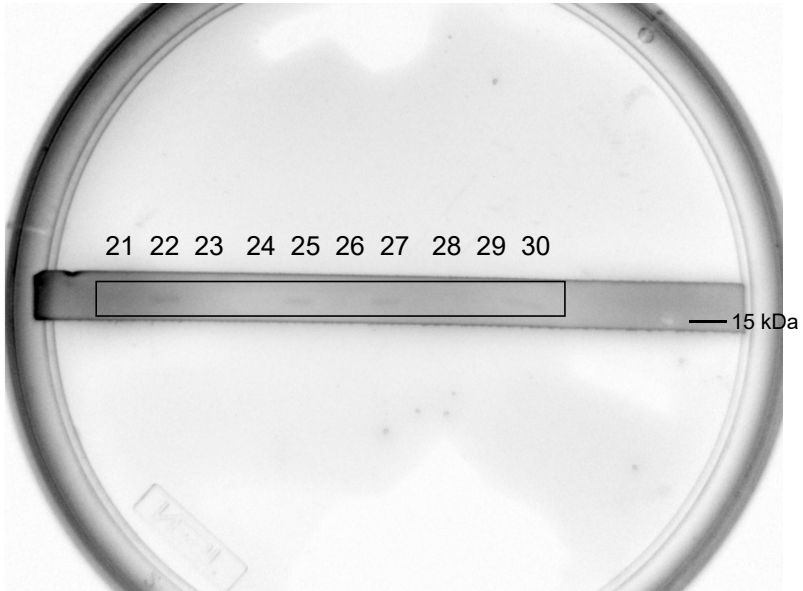
Bax



Bcl-2



Caspase-3



GAPDH

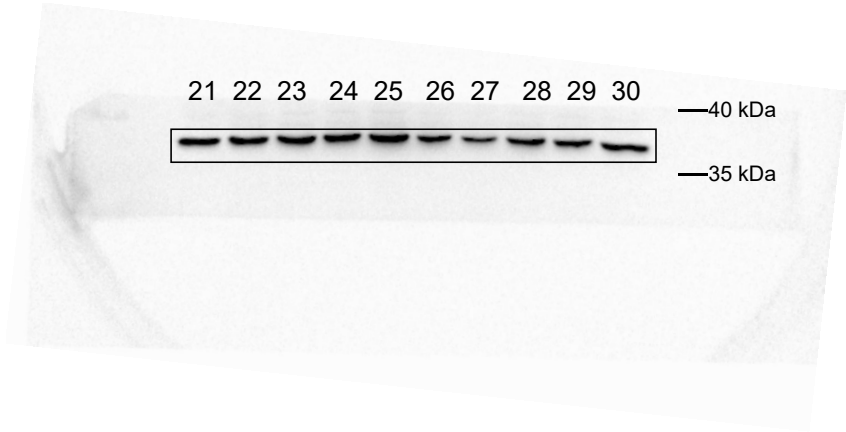
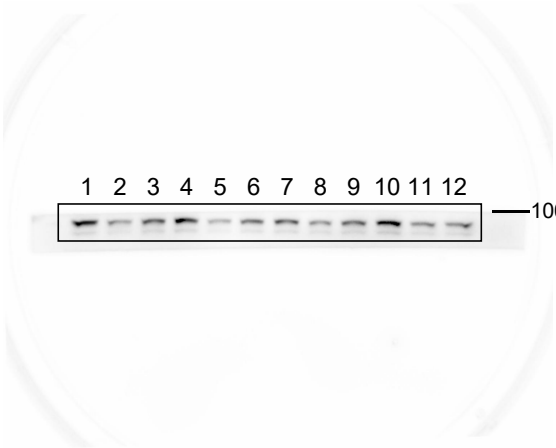


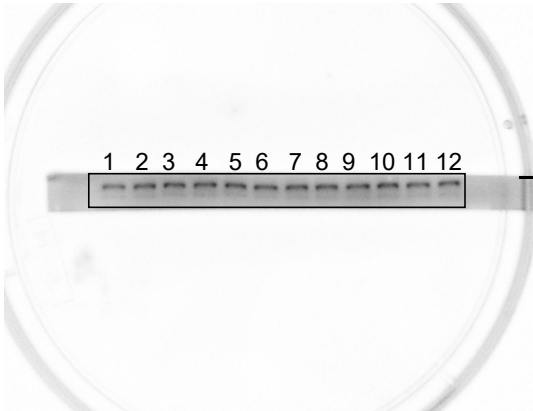
Fig.8 a

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β
- 13. AS 8w
- 14. AS 16w AAV-NC
- 15. AS 16w AAV-IL-1 β
- 16. AS 8w
- 17. AS 16w AAV-NC
- 18. AS 16w AAV-sgIL-1 β

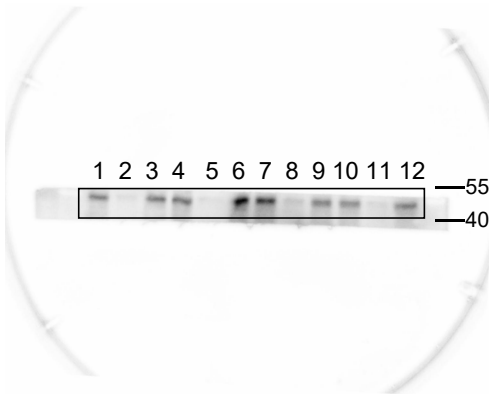
p-STAT3



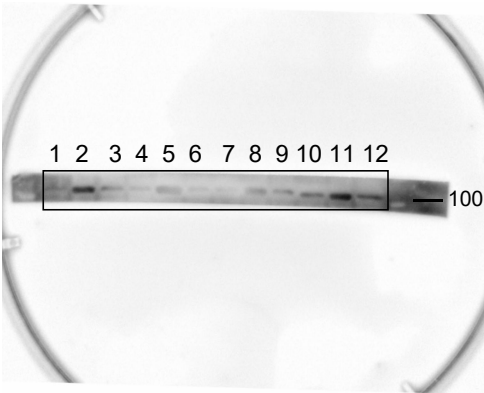
STAT3



α -SMA



CD68



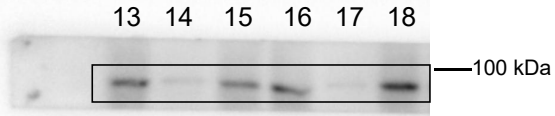
GAPDH



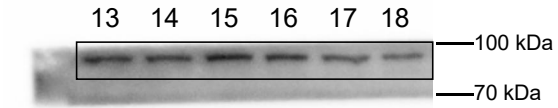
Fig.8 a

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β
- 13. AS 8w
- 14. AS 16w AAV-NC
- 15. AS 16w AAV-IL-1 β
- 16. AS 8w
- 17. AS 16w AAV-NC
- 18. AS 16w AAV-sgIL-1 β

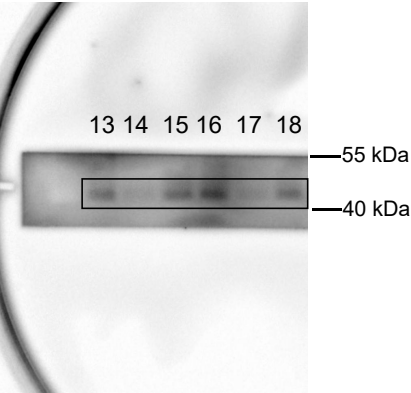
p-STAT3



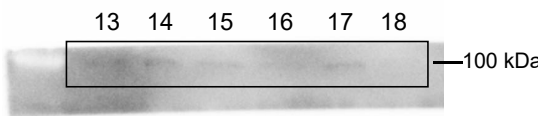
STAT3



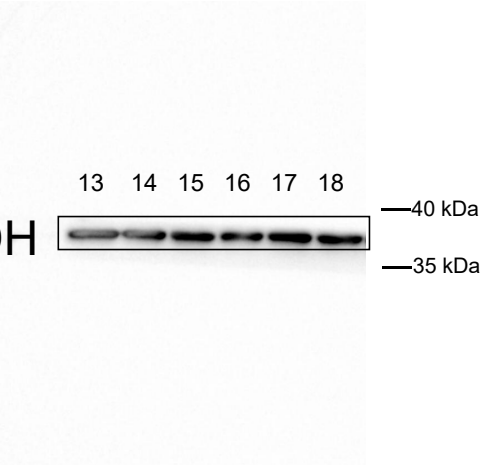
α -SMA



CD68



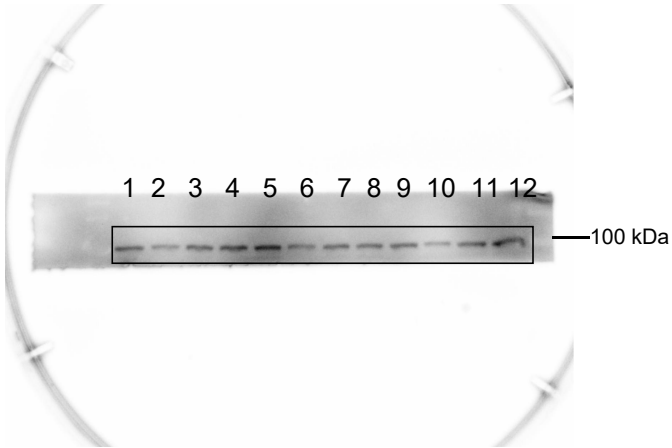
GAPDH



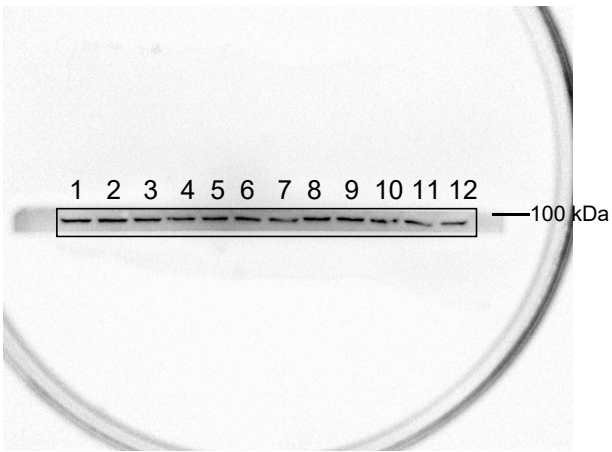
Sup Fig.9b

- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra
- 13. MM 12h
- 14. MM 48h
- 15. MM 12h+IL-1Ra
- 16. MM 48h+IL-1Ra
- 17. MM 12h
- 18. MM 48h
- 19. MM 12h+IL-1Ra
- 20. MM 48h+IL-1Ra
- 21. MM 12h
- 22. MM 48h
- 23. MM 12h+IL-1Ra
- 24. MM 48h+IL-1Ra

p-STAT3



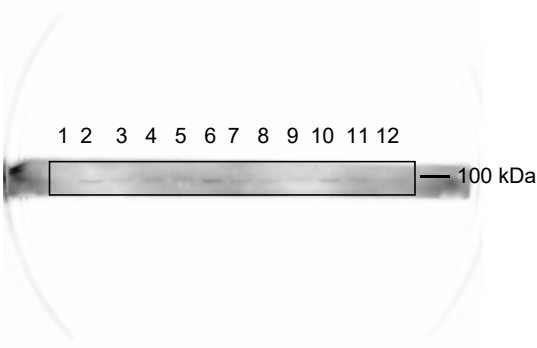
STAT3



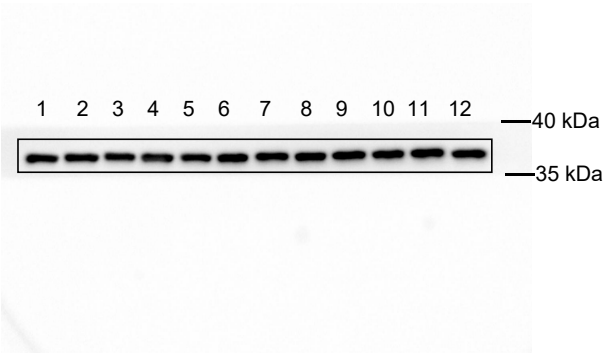
α -SMA



CD68



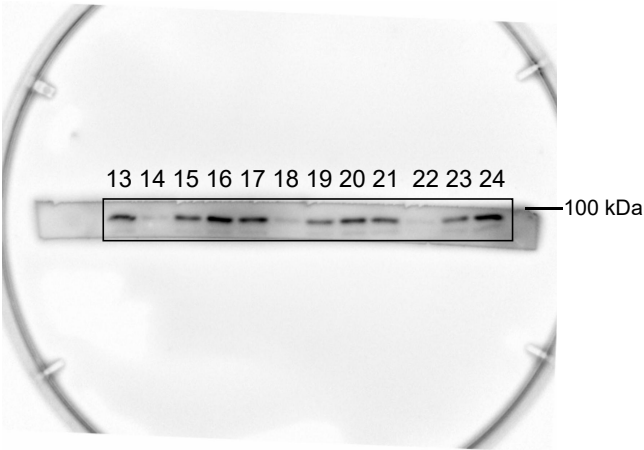
GAPDH



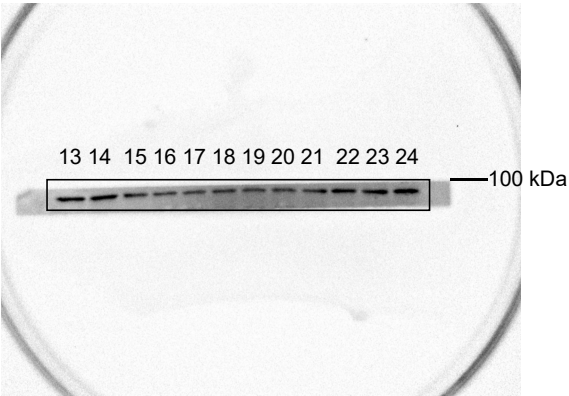
Sup Fig.9b

- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra
- 13. MM 12h
- 14. MM 48h
- 15. MM 12h+IL-1Ra
- 16. MM 48h+IL-1Ra
- 17. MM 12h
- 18. MM 48h
- 19. MM 12h+IL-1Ra
- 20. MM 48h+IL-1Ra
- 21. MM 12h
- 22. MM 48h
- 23. MM 12h+IL-1Ra
- 24. MM 48h+IL-1Ra

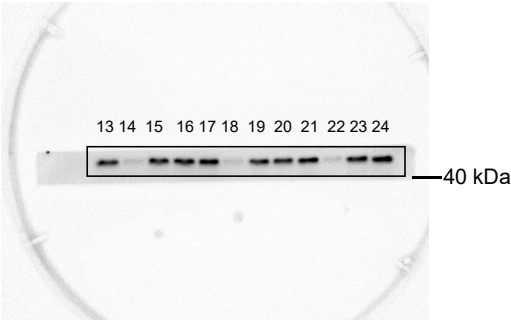
p-STAT3



STAT3



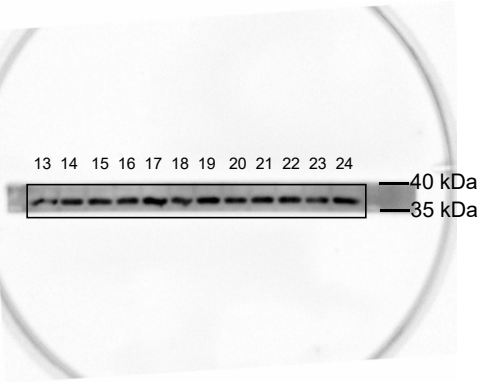
α -SMA



CD68



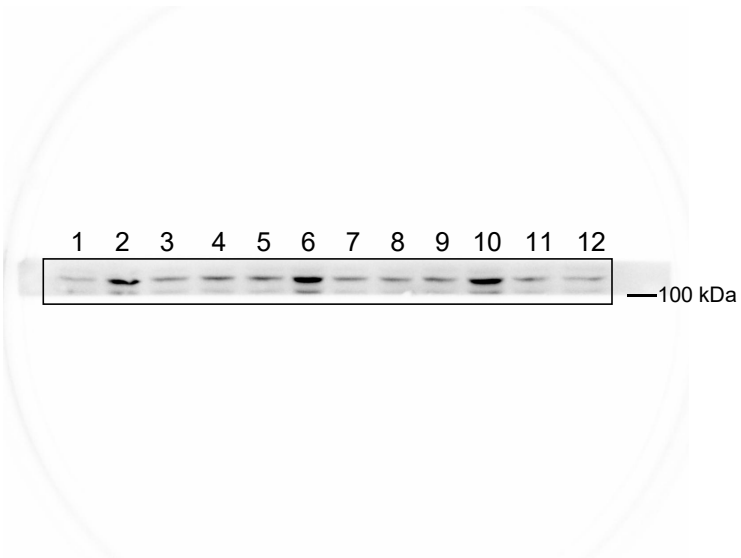
GAPDH



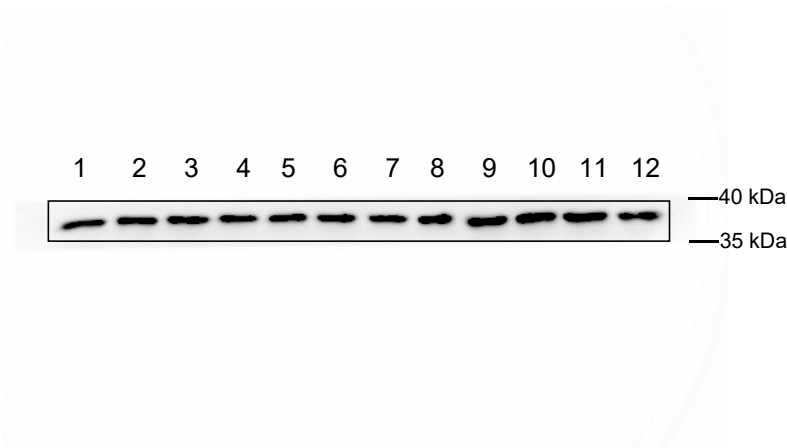
Sup Fig.9e

- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra
- 13. MM 12h
- 14. MM 48h
- 15. MM 12h+IL-1Ra
- 16. MM 48h+IL-1Ra
- 17. MM 12h
- 18. MM 48h
- 19. MM 12h+IL-1Ra
- 20. MM 48h+IL-1Ra
- 21. MM 12h
- 22. MM 48h
- 23. MM 12h+IL-1Ra
- 24. MM 48h+IL-1Ra

EPAS1



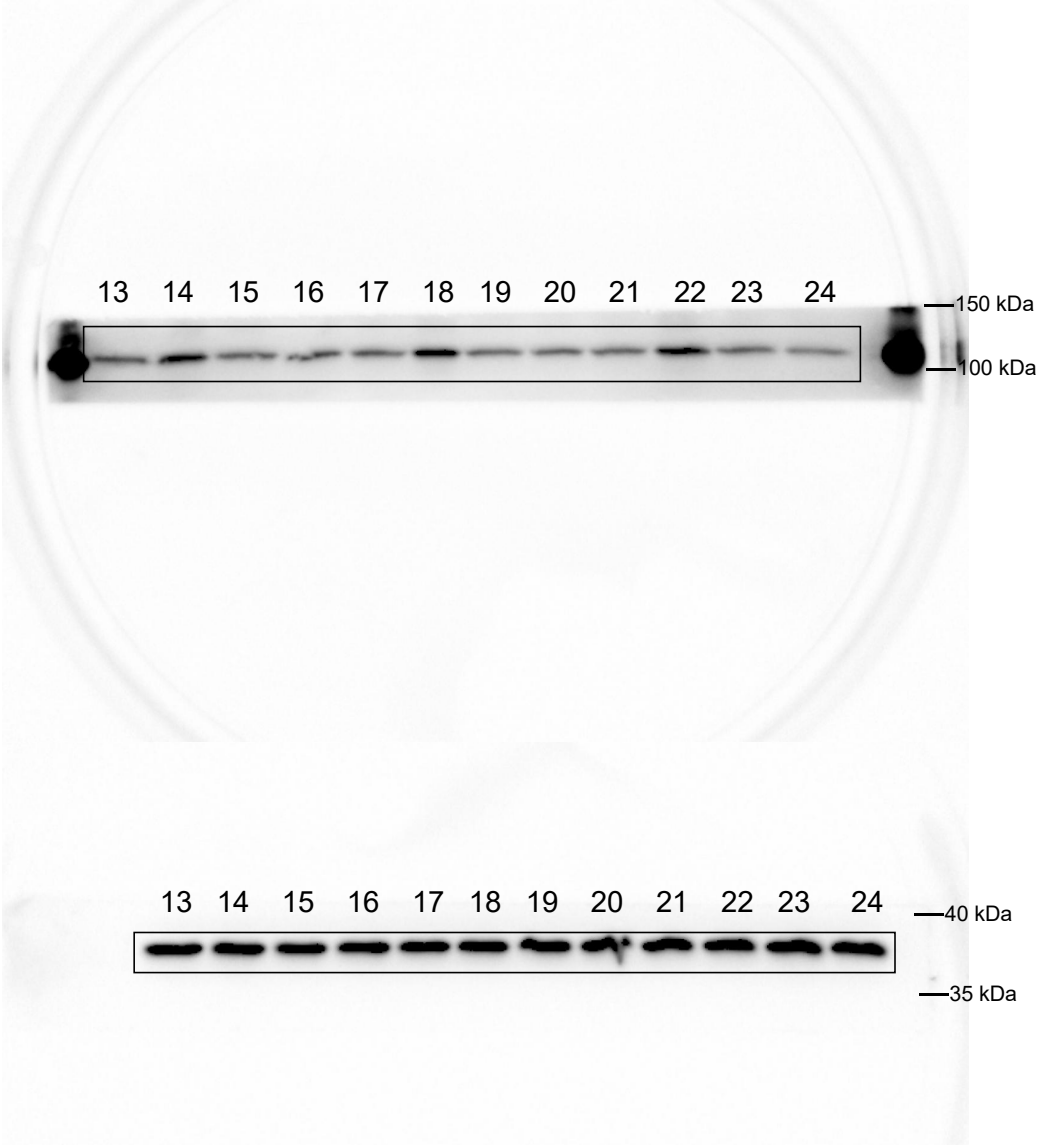
GAPDH



Sup Fig.9e

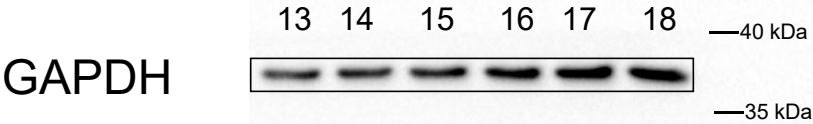
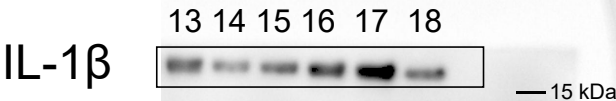
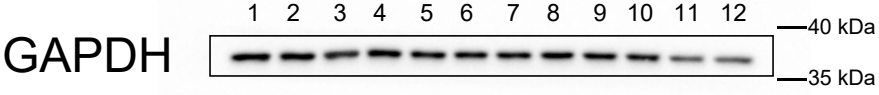
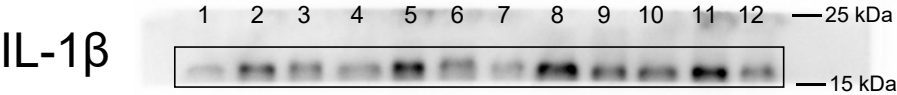
- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra
- 13. MM 12h
- 14. MM 48h
- 15. MM 12h+IL-1Ra
- 16. MM 48h+IL-1Ra
- 17. MM 12h
- 18. MM 48h
- 19. MM 12h+IL-1Ra
- 20. MM 48h+IL-1Ra
- 21. MM 12h
- 22. MM 48h
- 23. MM 12h+IL-1Ra
- 24. MM 48h+IL-1Ra

EPAS1



Sup Fig.11a

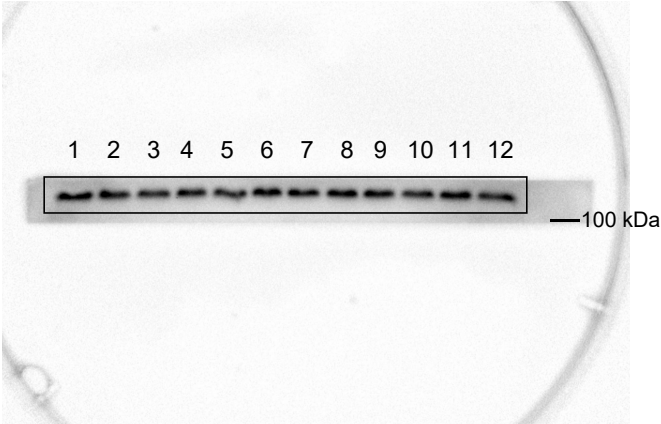
- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β
- 13. AS 8w
- 14. AS 16w AAV-NC
- 15. AS 16w AAV-sgIL-1 β
- 16. AS 8w
- 17. AS 16w AAV-NC
- 18. AS 16w AAV-sgIL-1 β



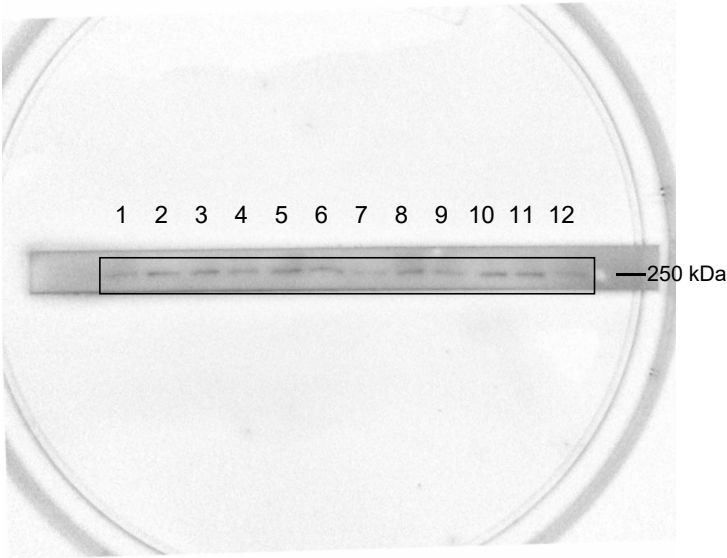
Sup Fig.11c

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β
- 13. AS 8w
- 14. AS 16w AAV-NC
- 15. AS 16w AAV-sgIL-1 β
- 16. AS 8w
- 17. AS 16w AAV-NC
- 18. AS 16w AAV-sgIL-1 β

CD34



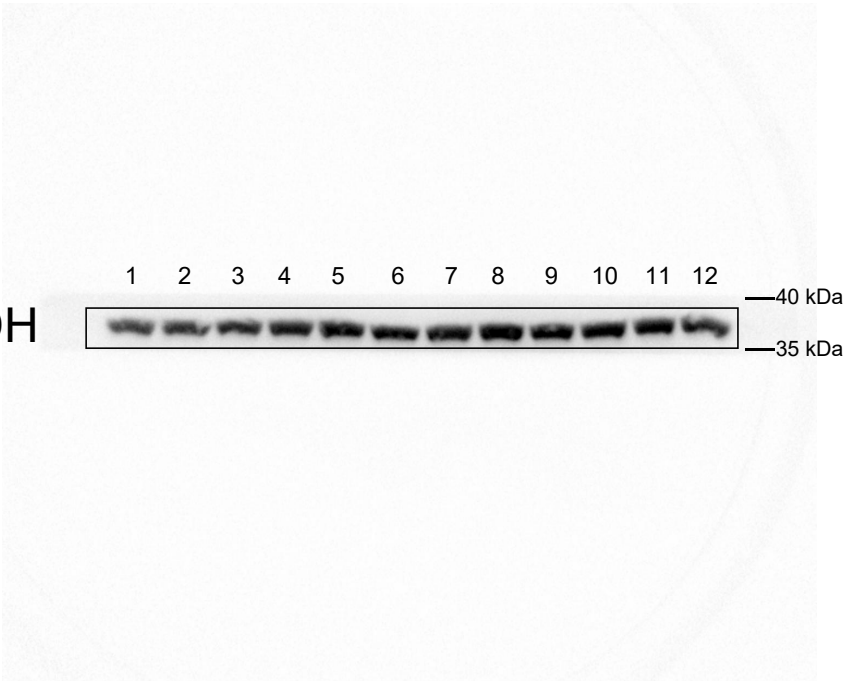
FN1



SOX9



GAPDH



Sup Fig.11c

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β
- 13. AS 8w
- 14. AS 16w AAV-NC
- 15. AS 16w AAV-sgIL-1 β
- 16. AS 8w
- 17. AS 16w AAV-NC
- 18. AS 16w AAV-sgIL-1 β

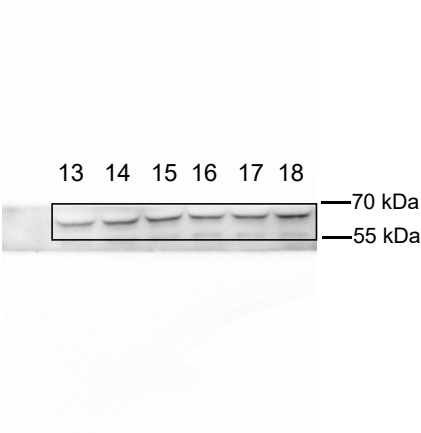
CD34



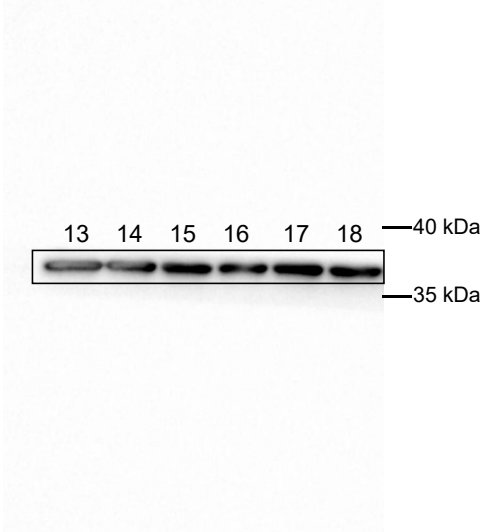
FN1



SOX9



GAPDH

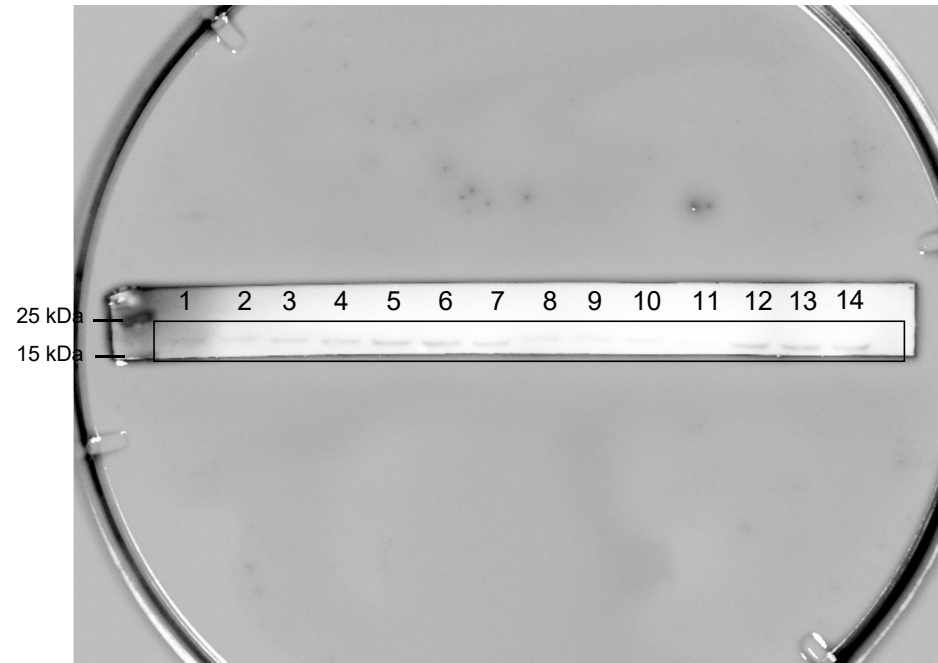


3.original blots with molecular marker ladders

Fig.7 a

1. oxLDL 0 $\mu\text{g/ml}$
2. oxLDL 10 $\mu\text{g/m}$
3. oxLDL 25 $\mu\text{g/m}$
4. oxLDL 50 $\mu\text{g/m}$
5. oxLDL 75 $\mu\text{g/m}$
6. oxLDL 100 $\mu\text{g/m}$
7. oxLDL 125 $\mu\text{g/ml}$
8. oxLDL 0 $\mu\text{g/ml}$
9. oxLDL 10 $\mu\text{g/m}$
10. oxLDL 25 $\mu\text{g/m}$
11. oxLDL 50 $\mu\text{g/m}$
12. oxLDL 75 $\mu\text{g/m}$
13. oxLDL 100 $\mu\text{g/m}$
14. oxLDL 125 $\mu\text{g/ml}$
15. oxLDL 0 $\mu\text{g/ml}$
16. oxLDL 10 $\mu\text{g/m}$
17. oxLDL 25 $\mu\text{g/m}$
18. oxLDL 50 $\mu\text{g/m}$
19. oxLDL 75 $\mu\text{g/m}$
20. oxLDL 100 $\mu\text{g/m}$
21. oxLDL 125 $\mu\text{g/ml}$
22. oxLDL 0 $\mu\text{g/ml}$
23. oxLDL 10 $\mu\text{g/m}$
24. oxLDL 25 $\mu\text{g/m}$
25. oxLDL 50 $\mu\text{g/m}$
26. oxLDL 75 $\mu\text{g/m}$
27. oxLDL 100 $\mu\text{g/m}$
28. oxLDL 125 $\mu\text{g/ml}$

IL-1 β



GAPDH

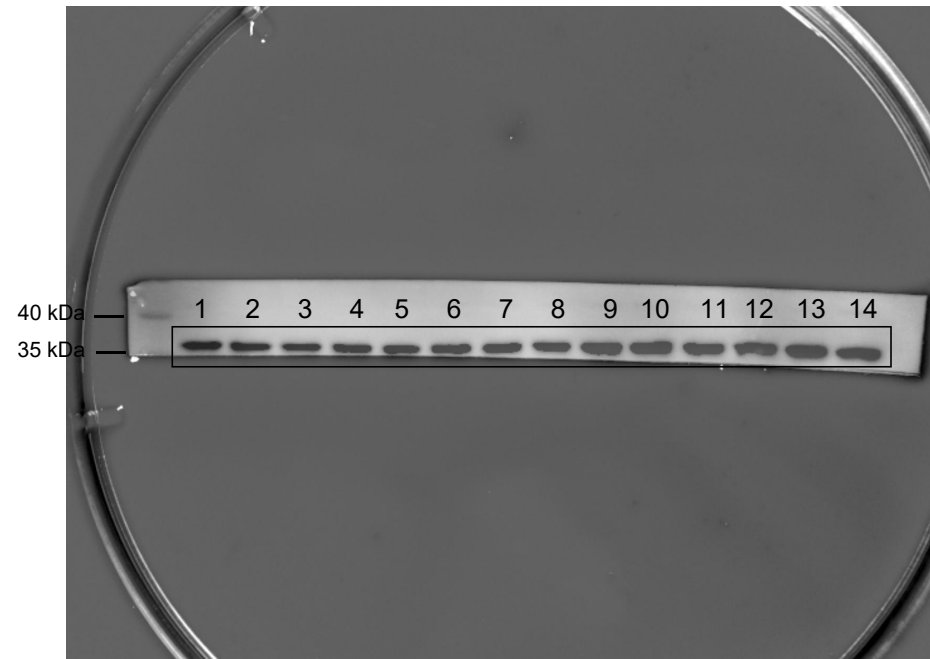
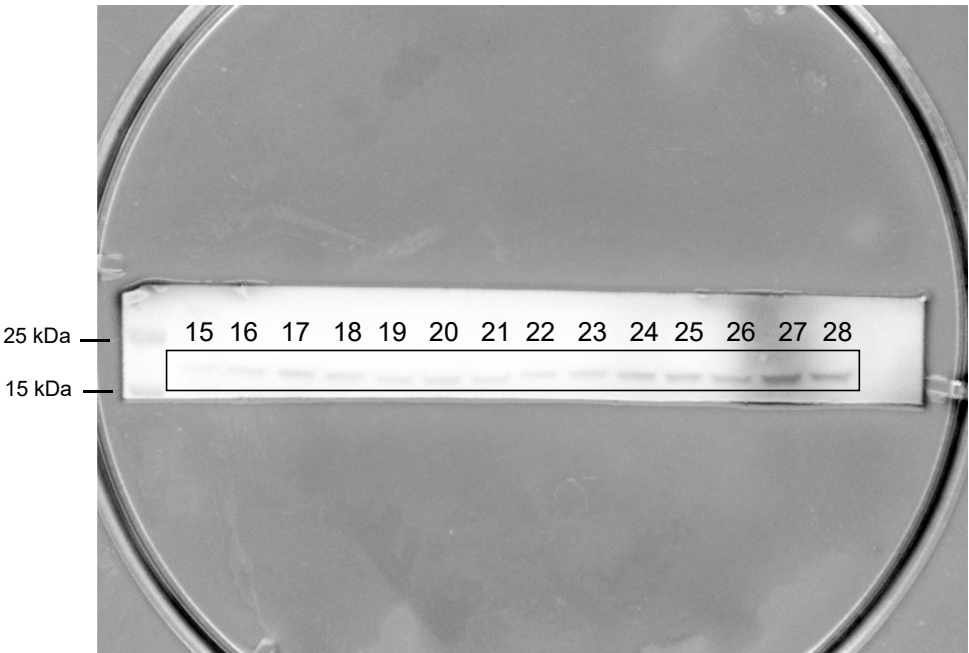


Fig.7 a

- 1. oxLDL 0 µg/ml
- 2. oxLDL 10 µg/ml
- 3. oxLDL 25 µg/ml
- 4. oxLDL 50 µg/ml
- 5. oxLDL 75 µg/ml
- 6. oxLDL 100 µg/ml
- 7. oxLDL 125 µg/ml
- 8. oxLDL 0 µg/ml
- 9. oxLDL 10 µg/ml
- 10. oxLDL 25 µg/ml
- 11. oxLDL 50 µg/ml
- 12. oxLDL 75 µg/ml
- 13. oxLDL 100 µg/ml
- 14. oxLDL 125 µg/ml
- 15. oxLDL 0 µg/ml
- 16. oxLDL 10 µg/ml
- 17. oxLDL 25 µg/ml
- 18. oxLDL 50 µg/ml
- 19. oxLDL 75 µg/ml
- 20. oxLDL 100 µg/ml
- 21. oxLDL 125 µg/ml
- 22. oxLDL 0 µg/ml
- 23. oxLDL 10 µg/ml
- 24. oxLDL 25 µg/ml
- 25. oxLDL 50 µg/ml
- 26. oxLDL 75 µg/ml
- 27. oxLDL 100 µg/ml
- 28. oxLDL 125 µg/ml

IL-1 β



GAPDH

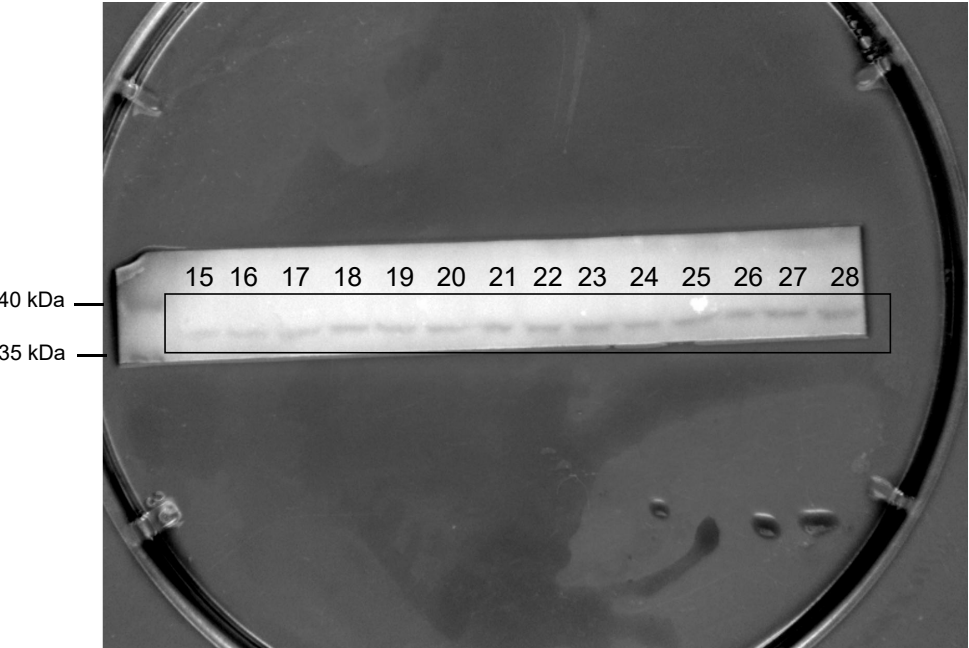
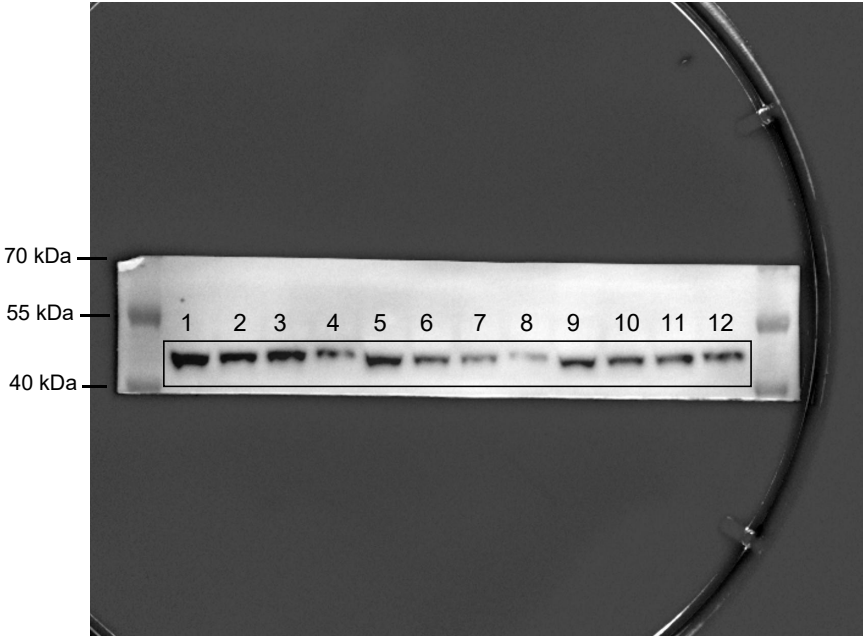


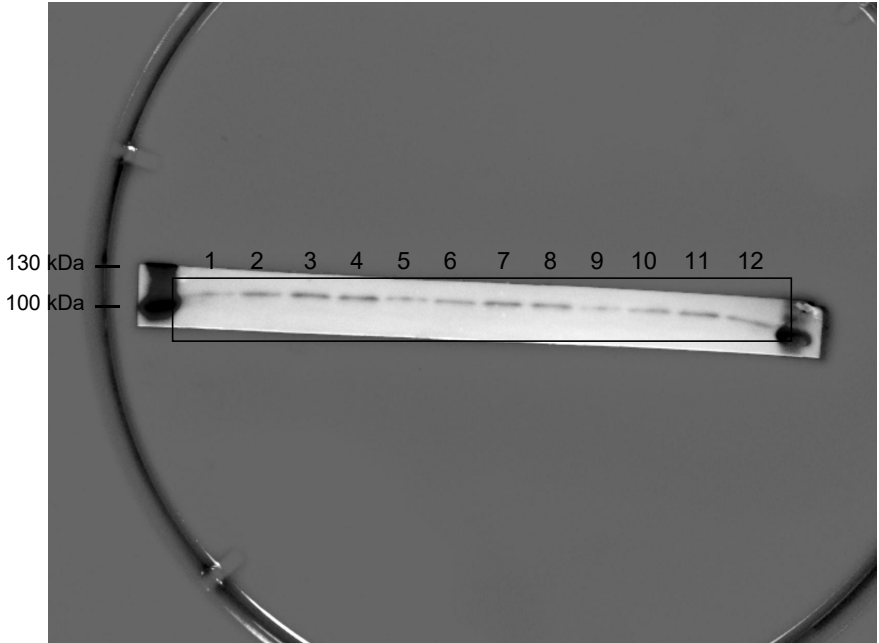
Fig.7 c

- 1. RM 0h
- 2. RM 12h
- 3. RM 24h
- 4. RM 48h
- 5. RM 0h
- 6. RM 12h
- 7. RM 24h
- 8. RM 48h
- 9. RM 0h
- 10. RM 12h
- 11. RM 24h
- 12. RM 48h

α -SMA



CD68



GAPDH

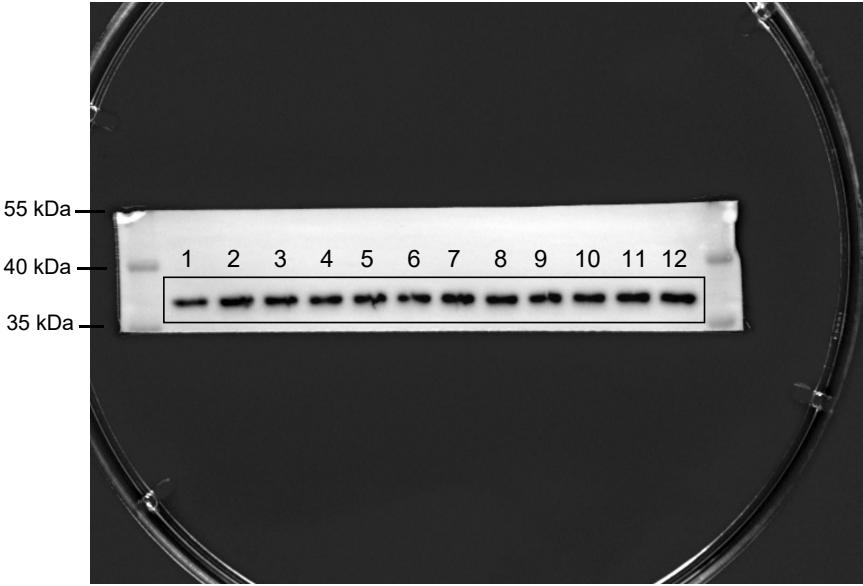
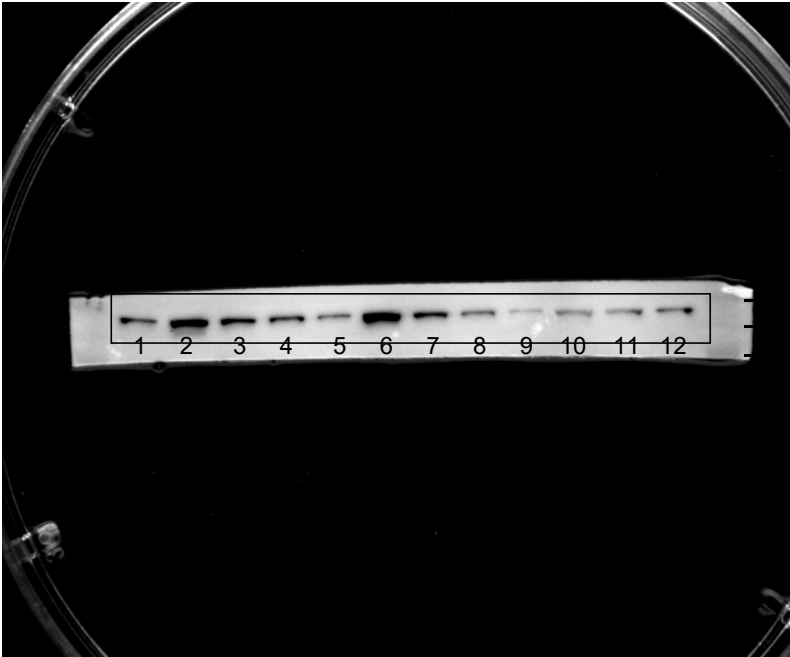


Fig.7 d

- 1. RM 0h
- 2. RM 12h
- 3. RM 24h
- 4. RM 48h
- 5. RM 0h
- 6. RM 12h
- 7. RM 24h
- 8. RM 48h
- 9. RM 0h
- 10. RM 12h
- 11. RM 24h
- 12. RM 48h

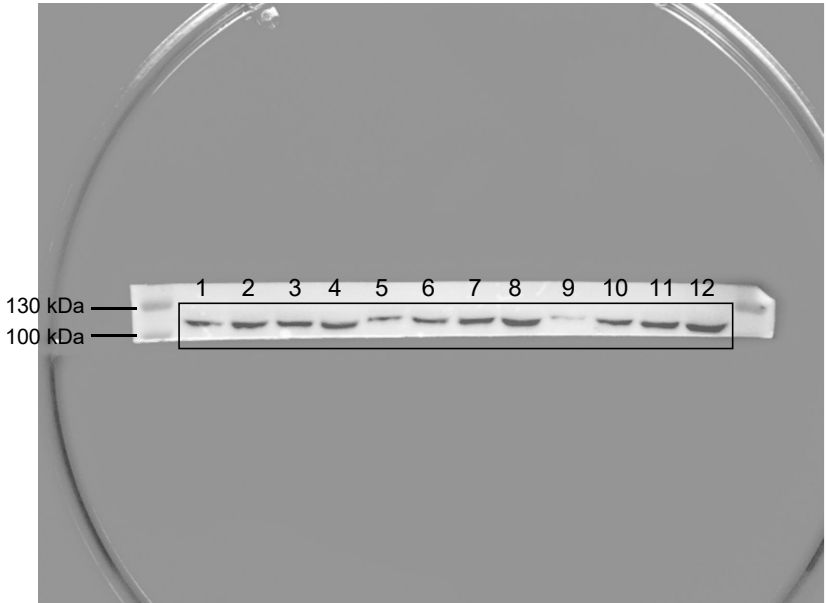
p-STAT3



STAT3



EPAS1



GAPDH

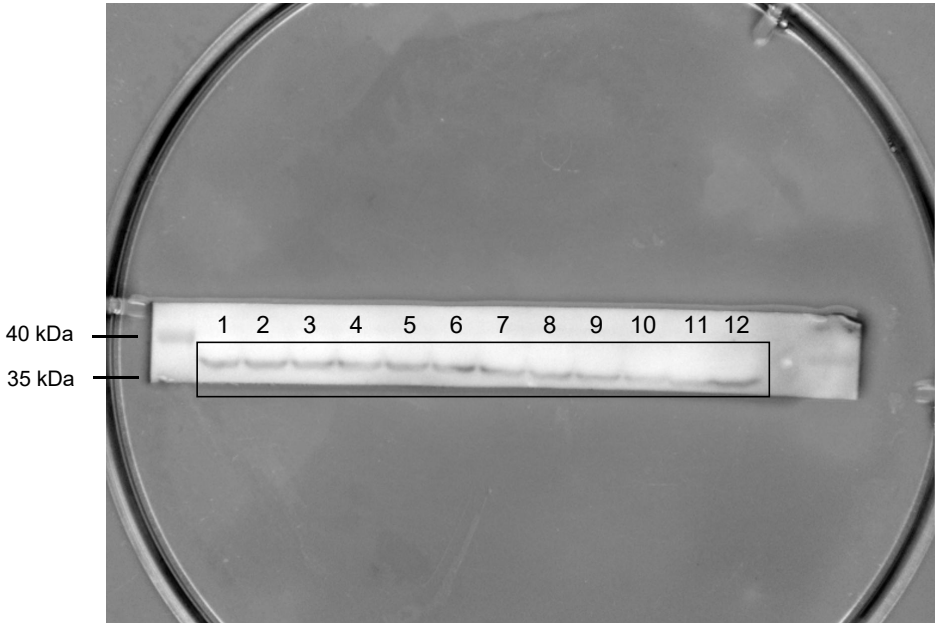
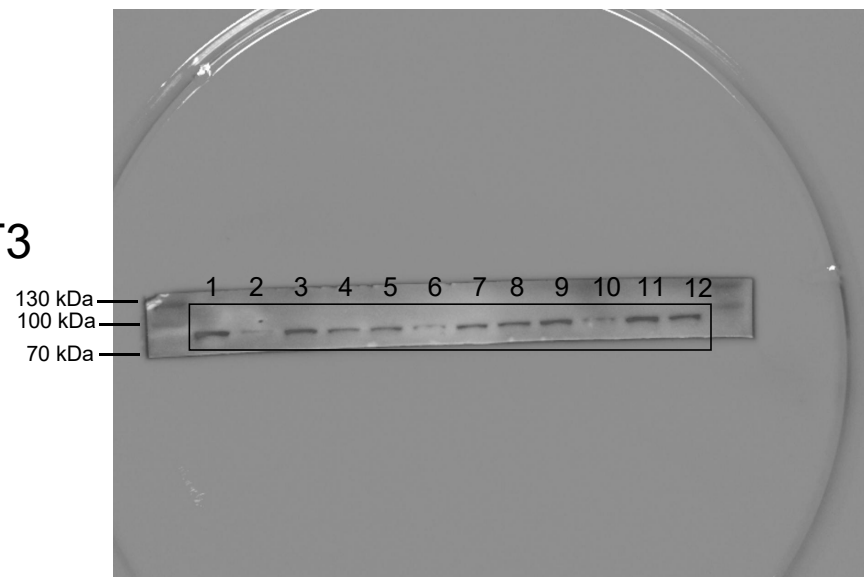


Fig.7 e

1. RM 12h
2. RM 48h
3. RM 12h+IL-1Ra
4. RM 48h+IL-1Ra
5. RM 12h
6. RM 28h
7. RM 12h+IL-1Ra
8. RM 48h+IL-1Ra
9. RM 12h
10. RM 48h
11. RM 12h+IL-1Ra
12. RM 48h+IL-1Ra

p-STAT3



STAT3

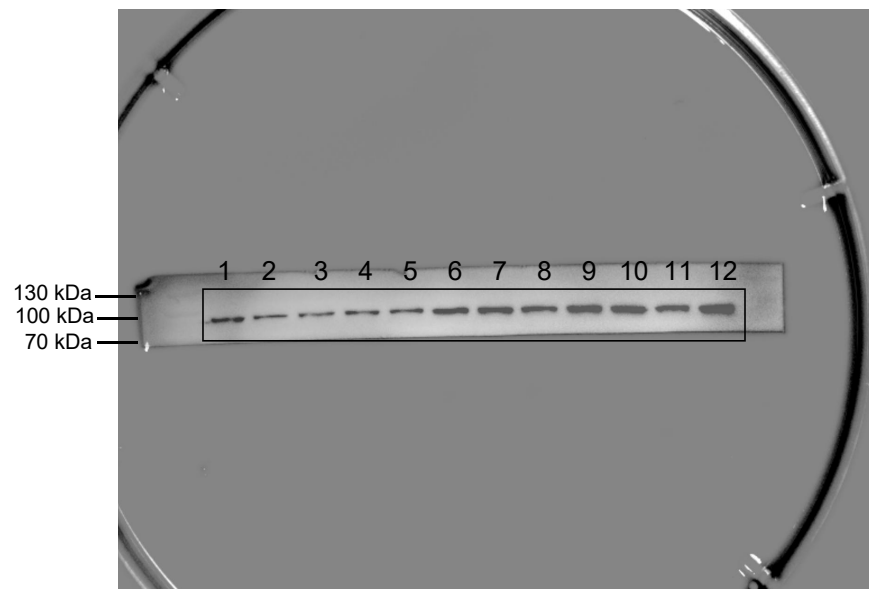
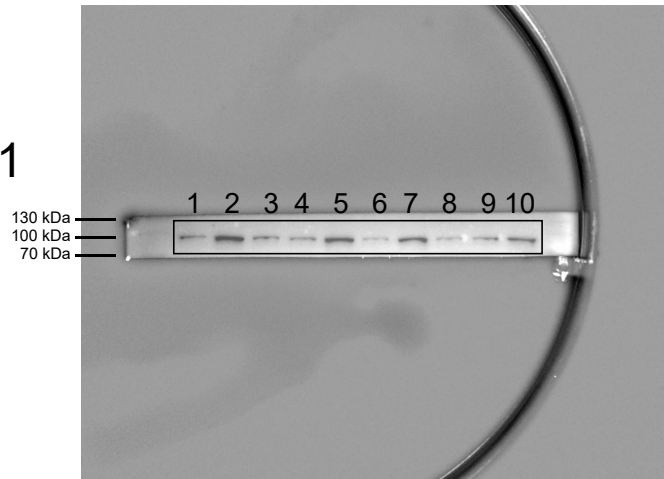


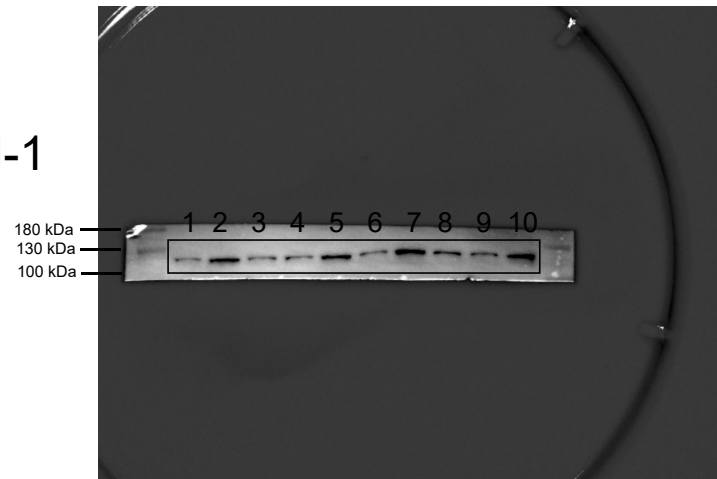
Fig.7 f

- 1. RM 12h
- 2. RM 48h
- 3. RM 48h+IL-1Ra
- 4. RM 48h+Colivelin
- 5. RM 48h+IL-1Ra+Stattic
- 6. RM 12h
- 7. RM 48h
- 8. RM 48h+IL-1Ra
- 9. RM 48h+Colivelin
- 10. RM 48h+IL-1Ra+Stattic

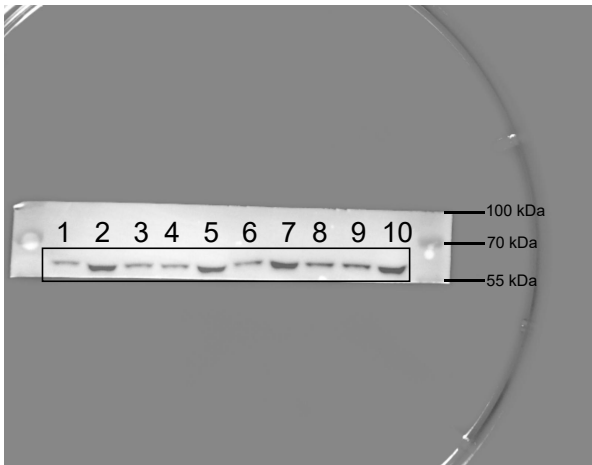
ICAM-1



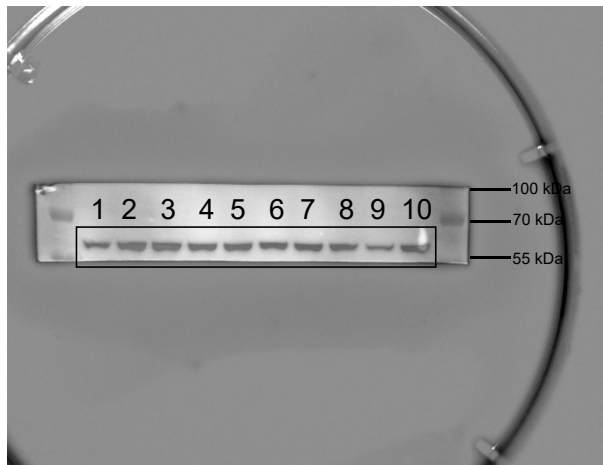
VCAM-1



p-p65



p65



MCP-1

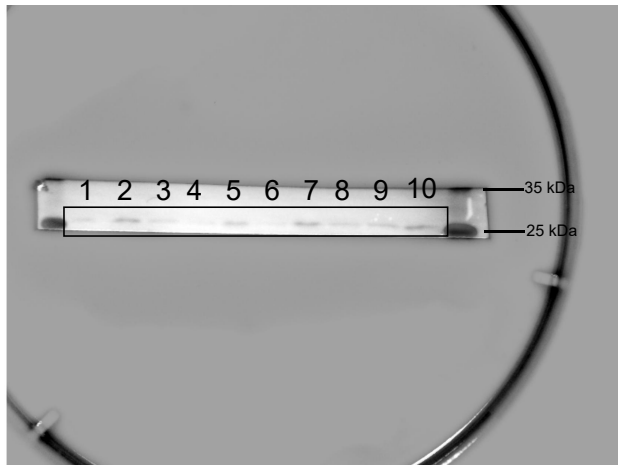
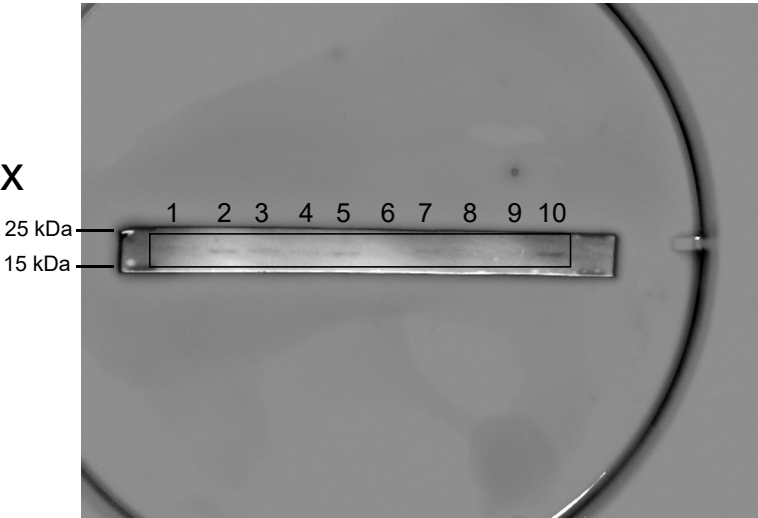


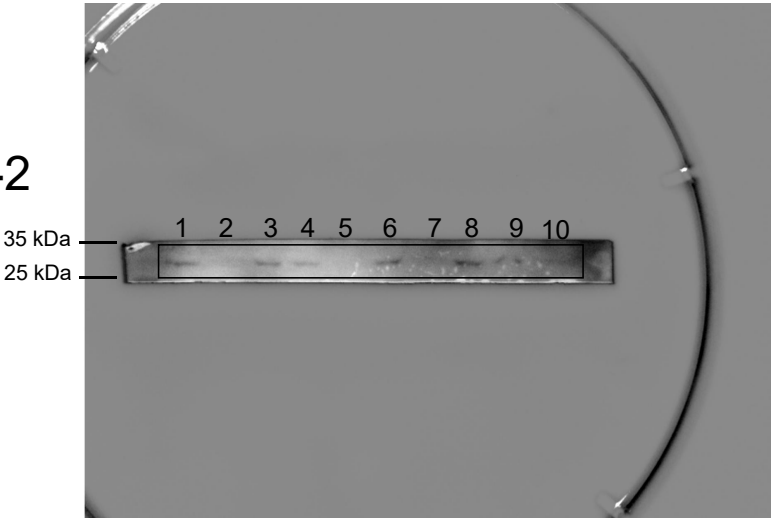
Fig.7 f

- 1. RM 12h
- 2. RM 48h
- 3. RM 48h+IL-1Ra
- 4. RM 48h+Colivelin
- 5. RM 48h+IL-1Ra+Stattic
- 6. RM 12h
- 7. RM 48h
- 8. RM 48h+IL-1Ra
- 9. RM 48h+Colivelin
- 10. RM 48h+IL-1Ra+Stattic

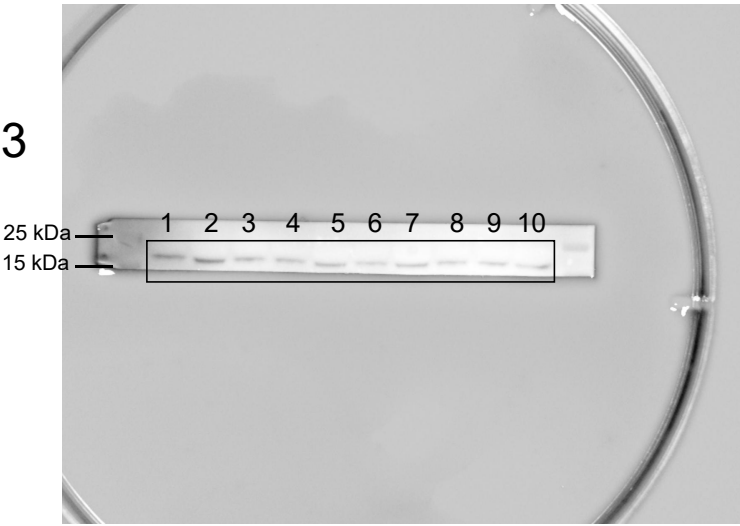
Bax



Bcl-2



Caspase-3



GAPDH

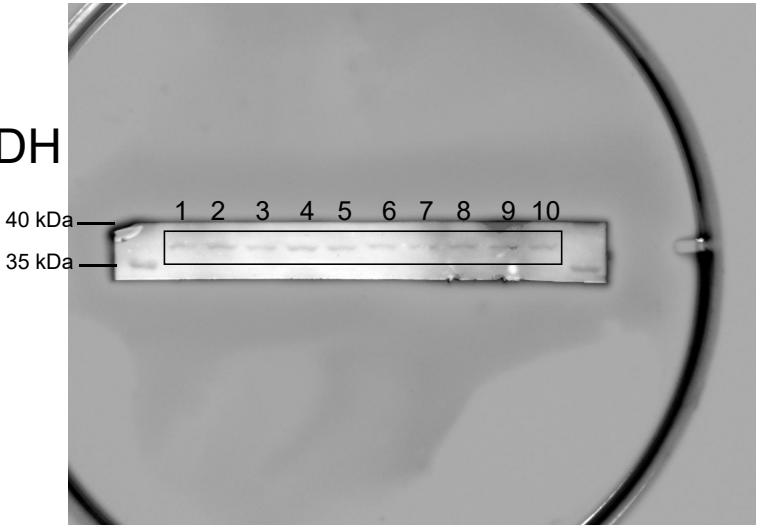
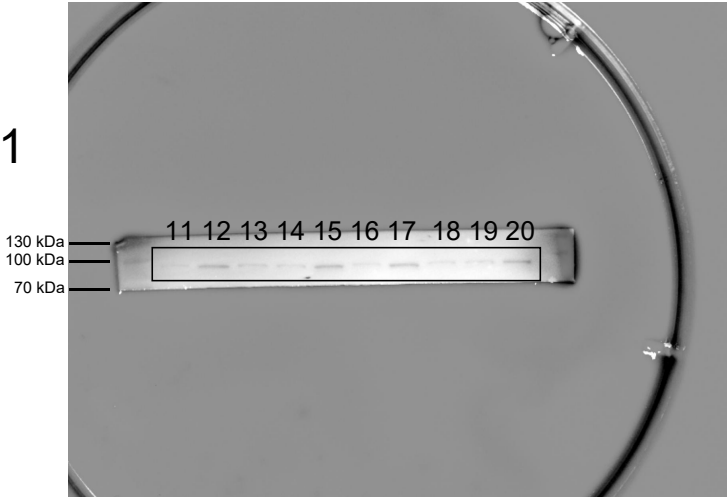


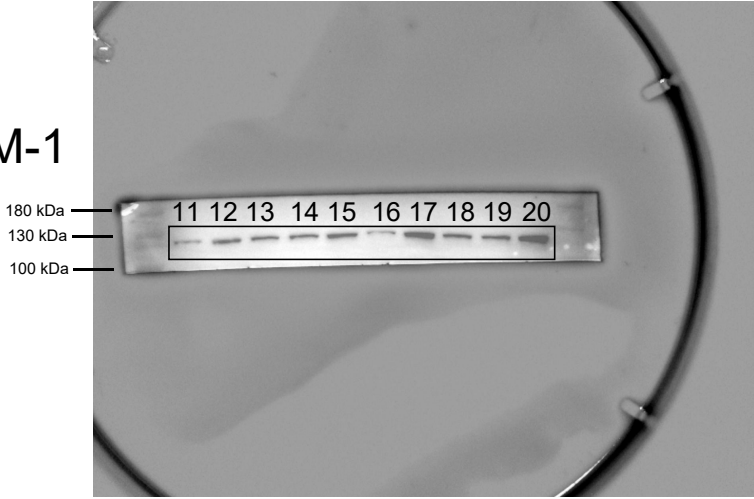
Fig.7 f

- 11. RM 12h
- 12. RM 48h
- 13. RM 48h+IL-1Ra
- 14. RM 48h+Colivelin
- 15. RM 48h+IL-1Ra+Stattic
- 16. RM 12h
- 17. RM 48h
- 18. RM 48h+IL-1Ra
- 19. RM 48h+Colivelin
- 20. RM 48h+IL-1Ra+Stattic

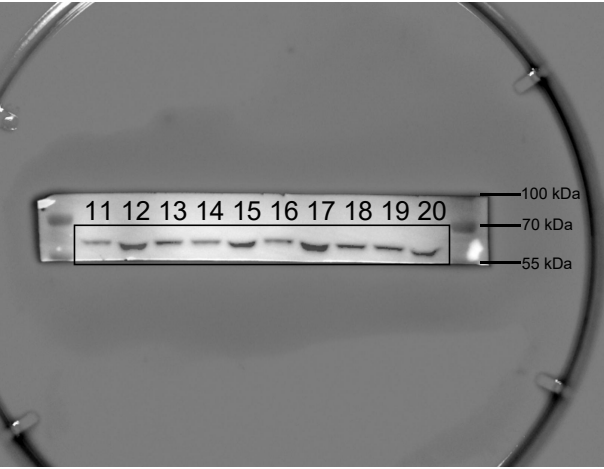
ICAM-1



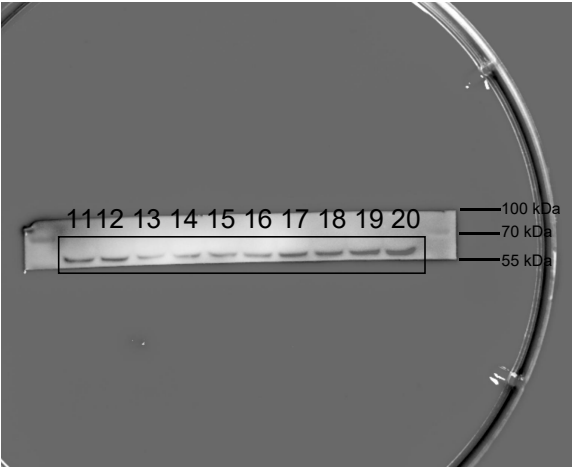
VCAM-1



p-p65



p65



MCP-1

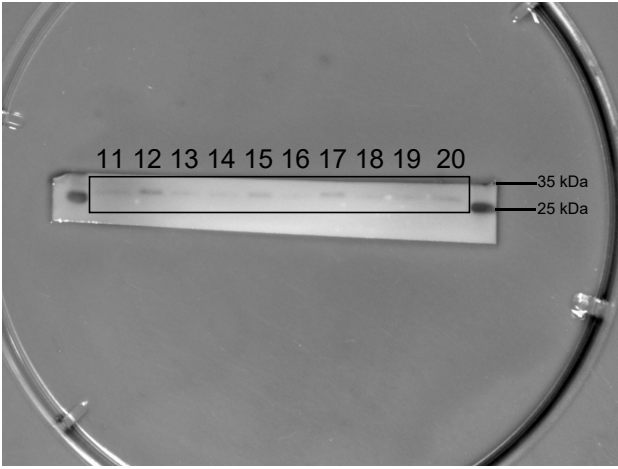


Fig.7 f

- 11. RM 12h
- 12. RM 48h
- 13. RM 48h+IL-1Ra
- 14. RM 48h+Colivelin
- 15. RM 48h+IL-1Ra+Stattic
- 16. RM 12h
- 17. RM 48h
- 18. RM 48h+IL-1Ra
- 19. RM 48h+Colivelin
- 20. RM 48h+IL-1Ra+Stattic

Bax



Bcl-2



Caspase-3



GAPDH



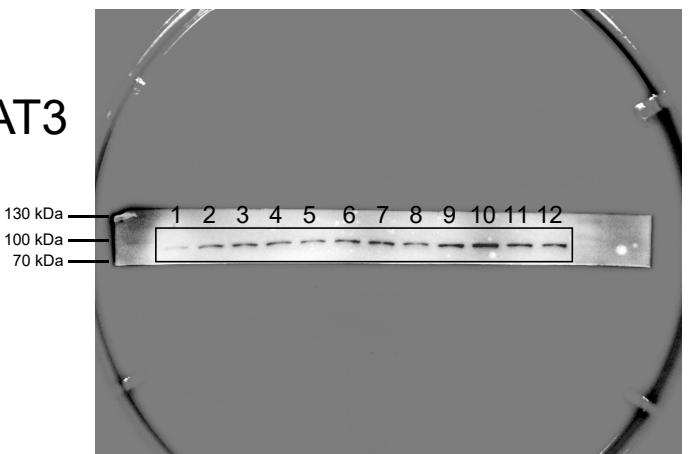
Fig.8 a

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β

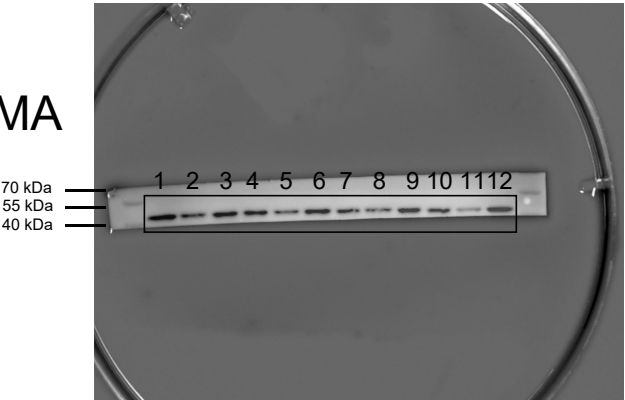
p-STAT3



STAT3



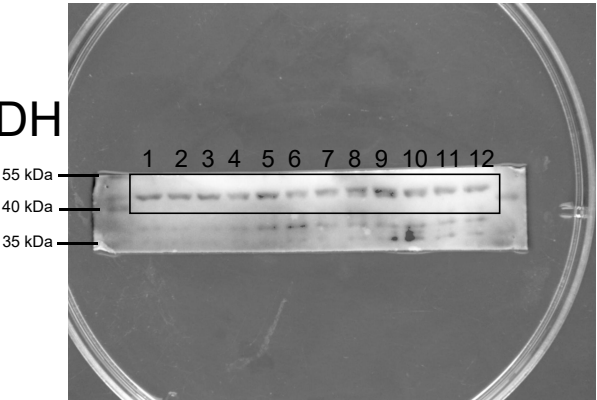
α -SMA



CD68

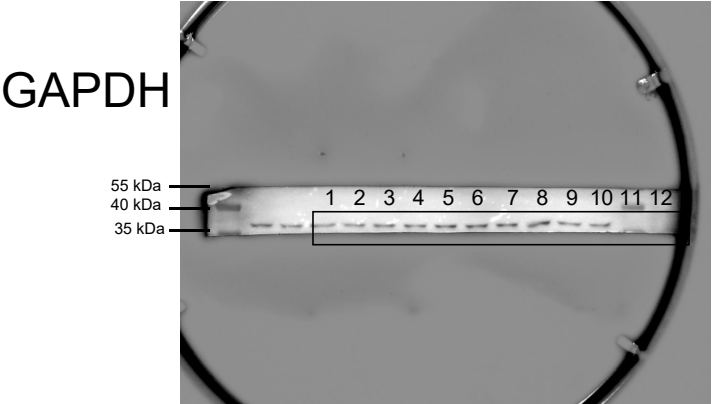
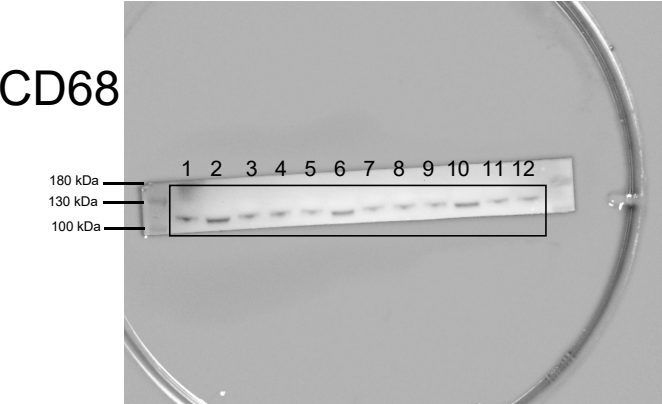
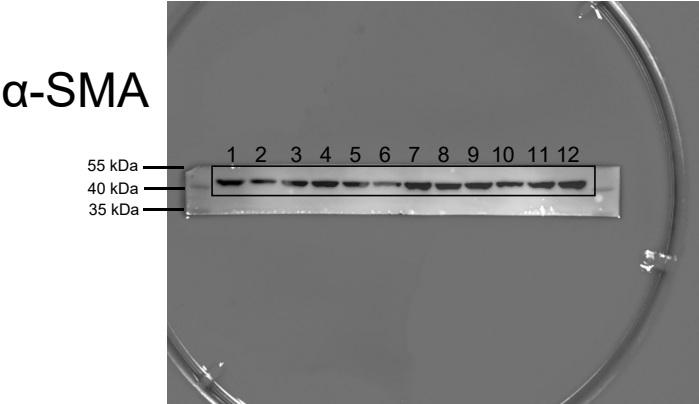
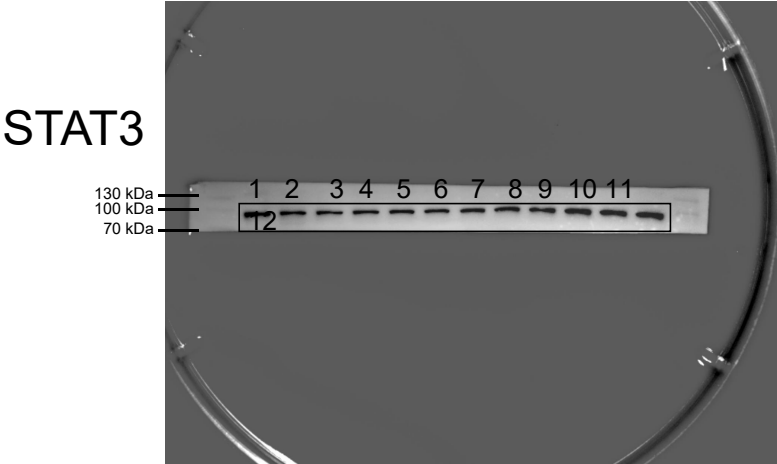
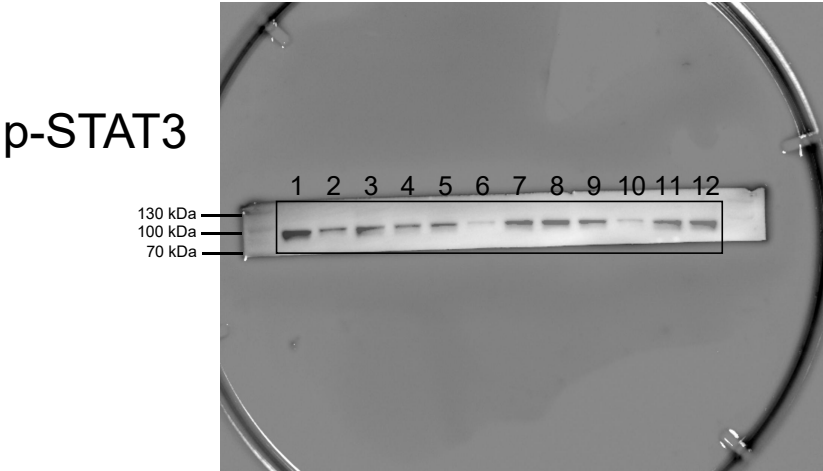


GAPDH



Sup Fig.9 b

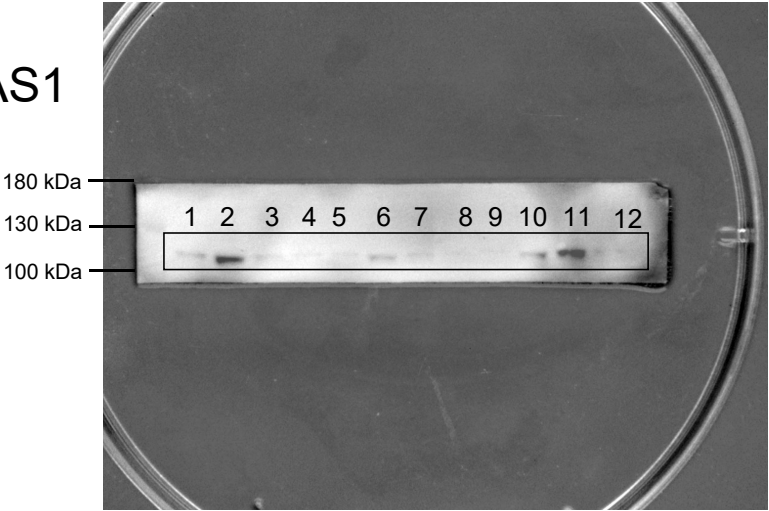
- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra



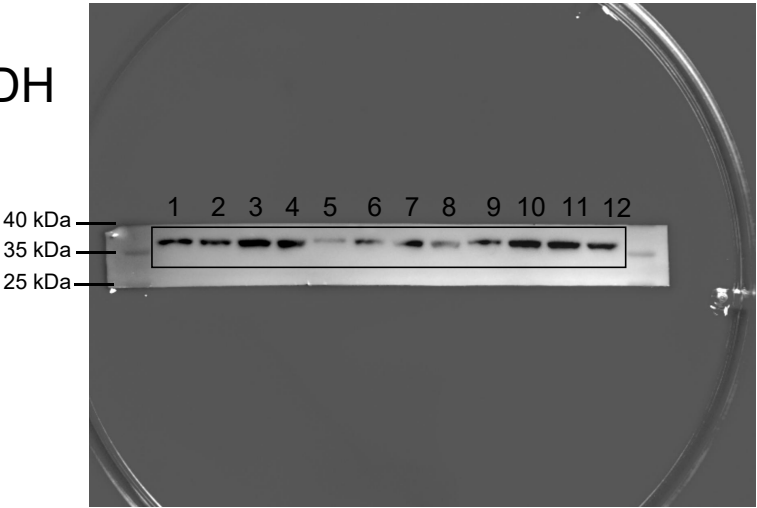
Sup Fig.9 e

- 1. MM 12h
- 2. MM 48h
- 3. MM 12h+IL-1Ra
- 4. MM 48h+IL-1Ra
- 5. MM 12h
- 6. MM 48h
- 7. MM 12h+IL-1Ra
- 8. MM 48h+IL-1Ra
- 9. MM 12h
- 10. MM 48h
- 11. MM 12h+IL-1Ra
- 12. MM 48h+IL-1Ra

EPAS1



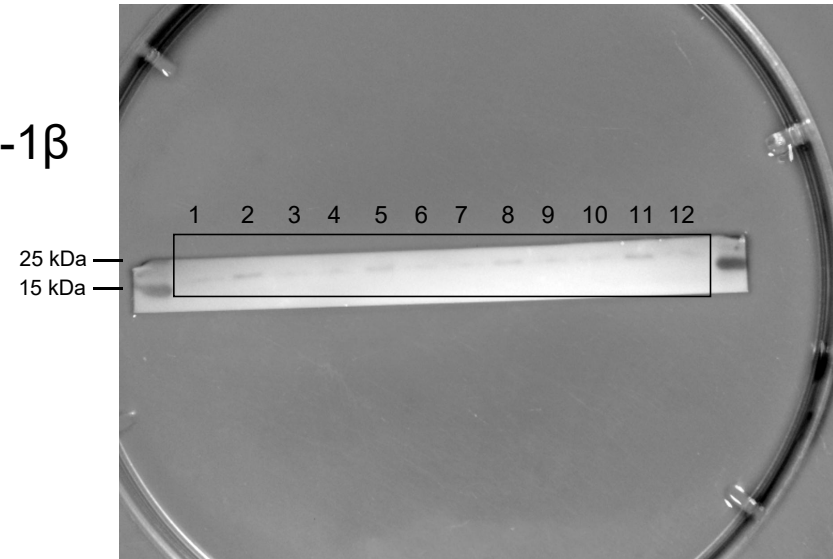
GAPDH



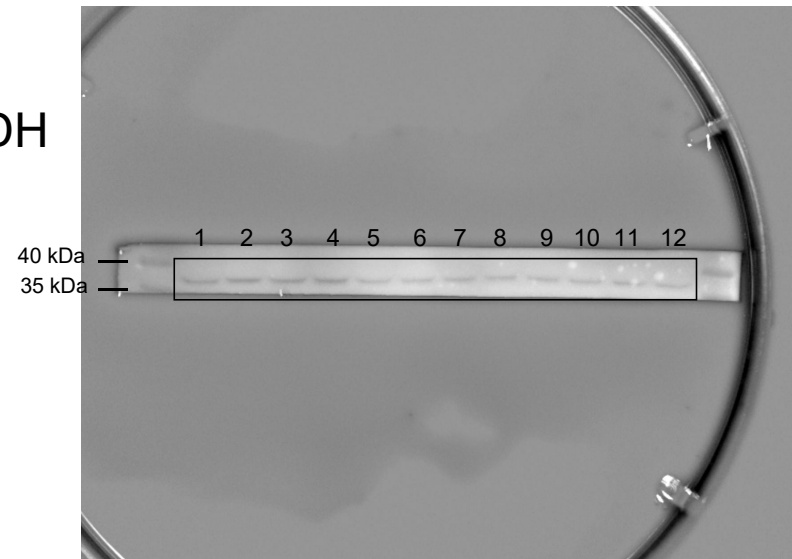
Sup Fig.11 a

1. AS 8w
2. AS 16w AAV-NC
3. AS 16w AAV-sgIL-1 β
4. AS 8w
5. AS 16w AAV-NC
6. AS 16w AAV-sgIL-1 β
7. AS 8w
8. AS 16w AAV-NC
9. AS 16w AAV-sgIL-1 β
10. AS 8w
11. AS 16w AAV-NC
12. AS 16w AAV-sgIL-1 β

IL-1 β



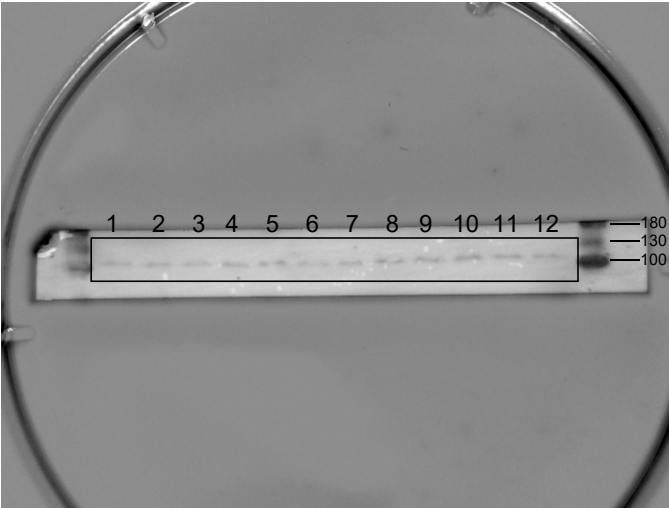
GAPDH



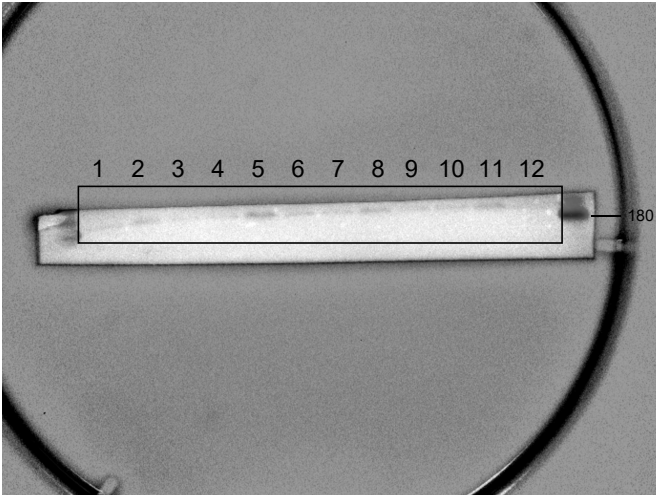
Sup Fig.11 c

- 1. AS 8w
- 2. AS 16w AAV-NC
- 3. AS 16w AAV-sgIL-1 β
- 4. AS 8w
- 5. AS 16w AAV-NC
- 6. AS 16w AAV-sgIL-1 β
- 7. AS 8w
- 8. AS 16w AAV-NC
- 9. AS 16w AAV-sgIL-1 β
- 10. AS 8w
- 11. AS 16w AAV-NC
- 12. AS 16w AAV-sgIL-1 β

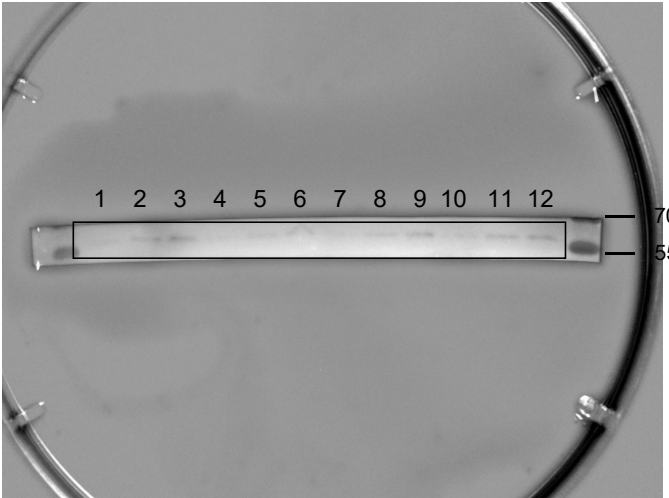
CD34



FN1



SOX9



GAPDH

