

## Online Figure Legends

**Online Figure I.** CHOL in FPLC fractions of male **(a)** and female **(b)**  $ApoE^{-/-}/Adfp^{-/-}$  and  $ApoE^{-/-}/Adfp^{+/+}$  mice.

**Online Figure II.** **(a)** Representative Oil Red O staining of peritoneal macrophages isolated from  $Adfp^{-/-}$  and  $Adfp^{+/+}$  mice in C57BL6/J  $ApoE^{+/+}$  background that were exposed to acLDL (50 µg/ml) for 24h; **(b)** Nile Red staining (green fluorescence) and **(c)** computer assisted quantification of LDs in peritoneal macrophages from  $Adfp^{-/-}$  and  $Adfp^{+/+}$  in C57BL6/J  $ApoE^{+/+}$  mice treated with acLDL (50µg/ml) for 24 h (n=3, \*p<0.03).

**Online Figure III.** Immunostaining of macrophages (brown color, upper panels) and Mason's trichrome (which stains collagen blue, smooth muscle cells red and nuclei black, lower panels) showing different stages of atherosclerosis development in lesions of male and female mice.

**Online Figure IV.** **(a)** Representative sections and **(b)** quantification of the rate of apoptosis in atherosclerotic lesions (n=3). **(c)** Total cell number in lesions (n=7); **(d)** % of necrotic cores related to the total lesion area (n=7); **(e)** % of lesion area that stained positive for macrophages; **(f)** collagen content (n=7); **(g)** calcium content (n= 8); and **(h)** iron deposition in lesions of  $ApoE^{-/-}/Adfp^{-/-}$  and  $ApoE^{-/-}/Adfp^{+/+}$  mice. No significant differences were observed in any of the measured parameters.

**Online Figure V.** (a) Representative fields and (b) measurement of apoptosis, assessed by TUNEL, in cultured macrophages pre-treated with acLDL for 24 hours (n= 4).

**Online Figure VI.** qPCR analysis of expression of inflammatory markers in peritoneal macrophages isolated from *ApoE*<sup>-/-</sup>/*Adfp*<sup>+/+</sup> (WT) or *ApoE*<sup>-/-</sup>/*Adfp*<sup>-/-</sup> (KO) mice cultured O/N in the absence (-ox) or in the presence (+ox) of oxLDL (50 µg/ml) (\*p<0.05 of cells cultured with 50 µg/ml of oxLDL vs. untreated cells; n=3). Note that treatment with oxLDL increased the expression of IL-6 and CCR1, but decreased the expression of CXCL1, CCR2, CCR5 and iNOS. However, compared to macrophages expressing ADFP, the lack of ADFP did not change the expression of any of the genes under any of the experimental conditions.

**Online Figure VII.** qPCR analysis of expression of inflammatory markers in aortic sinuses isolated from *ApoE*<sup>-/-</sup>/*Adfp*<sup>+/+</sup> (ADFP+/+) or *ApoE*<sup>-/-</sup>/*Adfp*<sup>-/-</sup> (ADFP-/-) normalized to the scavenger receptor CD-36 (n=4). No significant differences were observed between mice of both genotypes.

**Online Figure VIII.** NO<sub>2</sub> production in peritoneal macrophages. Peritoneal macrophages isolated from *ApoE*<sup>-/-</sup>/*Adfp*<sup>-/-</sup> and *ApoE*<sup>-/-</sup>/*Adfp*<sup>+/+</sup> mice were cultured in the presence or in the absence of 50 µg/mL oxLDL for 24 h. Supernatants were assayed for NO<sub>2</sub><sup>-</sup> by the Griess reagent. Data are expressed as micromoles of NO<sub>2</sub><sup>-</sup> per mg of protein.

**Online Figure IX.** Representative fields and quantification of phagocytic activity in peritoneal macrophages isolated from *ApoE*<sup>-/-</sup>/*Adfp*<sup>-/-</sup> and *ApoE*<sup>-/-</sup>/*Adfp*<sup>+/+</sup> mice. Peritoneal macrophages

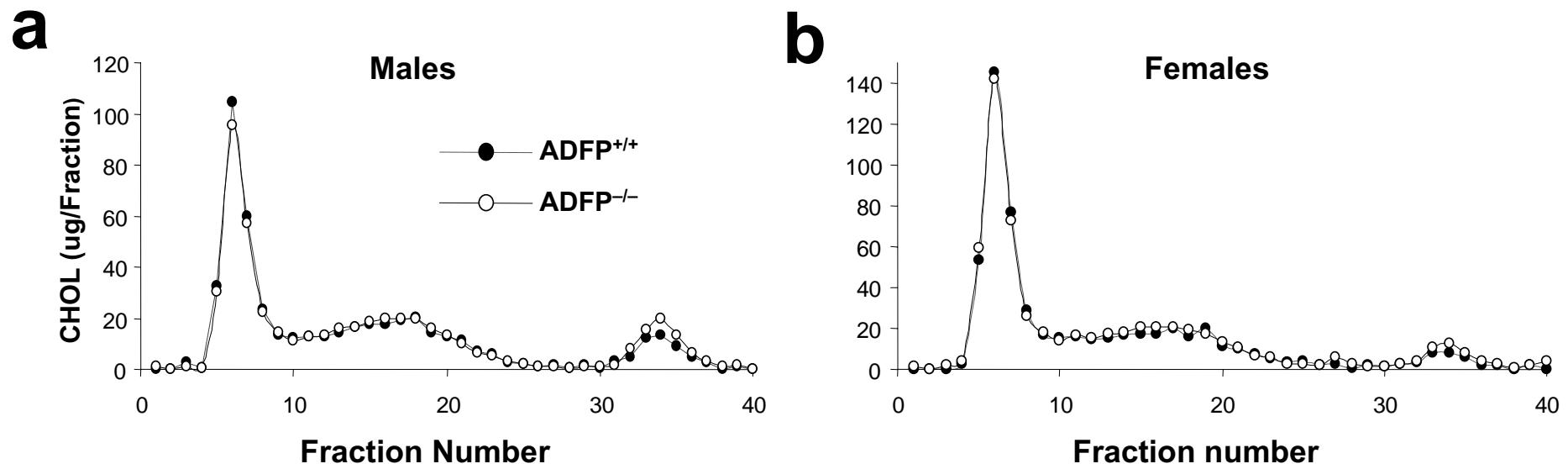
isolated from 4 *ApoE*<sup>-/-</sup>/*Adfp*<sup>-/-</sup> and 4 *ApoE*<sup>-/-</sup>/*Adfp*<sup>+/+</sup> mice were loaded O/N with acLDL (50 µg/mL) and incubated for 150 min with apoptotic thymocytes labeled with CellTracker Green (1,500,000/mL). Cells were counterstained with DAPI. The activity for each mouse was obtained by counting the number of apoptotic cells per macrophage in 5 different fields.

**Online Table I.** BWs and plasma lipids.

BW (g)	Males		Females	
	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>
8 weeks	19.8 ± 2.0	20.4 ± 1.2	15.8 ± 0.9	16.4 ± 1.6
15 weeks	22.2 ± 2.2	22.8 ± 1.1	18.2 ± 1.0	18.0 ± 1.2
20 weeks	23.5 ± 2.0	24.2 ± 1.2	18.6 ± 1.2	18.6 ± 1.1
<b>BW increase</b>	<b>3.7 ± 1.1</b>	<b>3.8 ± 0.7</b>	<b>2.7 ± 0.8</b>	<b>2.2 ± 1.1</b>
CHOL (mmol/L)	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>
8 weeks	9.54 ± 2.46	11.95 ± 4.54	11.97 ± 2.56	12.18 ± 2.95
15 weeks	11.26 ± 3.31	10.97 ± 4.36	10.59 ± 2.15	10.36 ± 2.97
20 weeks	11.26 ± 1.56	10.18 ± 2.21	9.87 ± 1.87	11.08 ± 1.72
<b>Mean</b>	<b>10.69 ± 1.77</b>	<b>11.03 ± 2.79</b>	<b>10.82 ± 1.74</b>	<b>11.21 ± 1.51</b>
TG (mmol/L)	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>	ADFP <sup>+/+</sup> apoE <sup>-/-</sup>	ADFP <sup>-/-</sup> apoE <sup>-/-</sup>
8 weeks	0.94 ± 0.35	1.13 ± 0.17	0.79 ± 0.10	0.71 ± 0.16
15 weeks	0.75 ± 0.18	0.76 ± 0.13	0.58 ± 0.11	0.62 ± 0.12
20 weeks	0.88 ± 0.27	0.87 ± 0.25	0.72 ± 0.20	0.70 ± 0.15
<b>Mean</b>	<b>0.87 ± 0.22</b>	<b>0.92 ± 0.11</b>	<b>0.70 ± 0.08</b>	<b>0.67 ± 0.08</b>

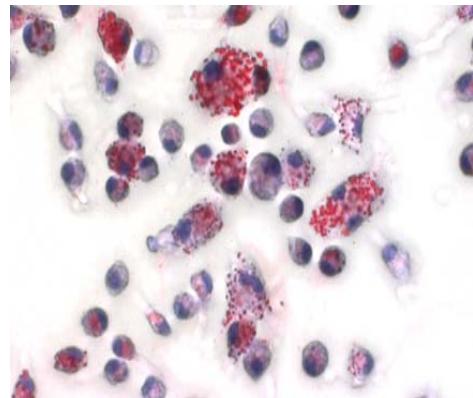
**Online Table II.** Sequences of the primers used for qPCR.

Name	Sequence	Name	Sequence
<b>ADFP</b>	Forward: 5'-gattgaattcgccaggaga-3' Reverse: 5'-tggcatgttagtctggagctg-3'	<b>TNF<math>\alpha</math></b>	Forward: 5'-cgtagccgatttgctatct-3' Reverse: 5'-cgactccgcaaagtctaag-3'
<b>PLIN</b>	Forward: 5'-gtcgtcatggctctatcc -3' Reverse: 5'-ggccaacacttttcgac-3'	<b>IL-1<math>\alpha</math></b>	Forward: 5'-tcgggaggagacgactcaa-3' Reverse: 5'-tggataagcagctgtatgtgaa-3'
<b>TIP47</b>	Forward: 5'-ctgagaaaaggcgtcaagacc-3' Reverse: 5'-tttcttgagccccagacact-3'	<b>IL-1<math>\beta</math></b>	Forward: 5'-gggcctcaaaggaaagaatc-3' Reverse: 5'-ctctgcttgaggtgctga-3'
<b>S3-12</b>	Forward: 5'-caggctgctataggcctgac -3' Reverse: 5'-aggcaagggagaagaaccat-3'	<b>CXCL1</b>	Forward: 5'-gcctatcgccaaatgagctg-3' Reverse: 5'-gcatctttggacaatttctg-3'
<b>GAPDH</b>	Forward: 5'-attgtgccatcaacgaccc-3' Reverse: 5'-ccacgacatactcagcacc -3'	<b>CXCL2</b>	Forward: 5'-agtgaactgcgctgtcaatg-3' Reverse: 5'-ttcagggtaaggcaaactt-3'
<b>SR-A</b>	Forward: 5'-ttcactggatgcaatctcca-3' Reverse: 5'-acgtgcgcttgttctt-3'	<b>IL-10</b>	Forward: 5'-ccaaggcattatcgaaatga -3' Reverse: 5'-tcactcttcacatgtccac -3'
<b>CD36</b>	Forward: 5'-tggagctgttattggcag-3' Reverse: 5'-gttcttgccacgtcatctg-3'	<b>IL-6</b>	Forward: 5'-ttccatccagttgcctt-3' Reverse: 5'-cagaattgcccattgcacaac-3'
<b>ABCA1</b>	Forward: 5'-tagcagcacccgtgtctgtc-3' Reverse: 5'-tacggcagcacataggtcag-3'	<b>JE/</b>	Forward: 5'-cccactcacctgctgctact-3'
<b>ABCG1</b>	Forward: 5'-tccatcgctgttaccatcca-3' Reverse: 5'-tactccctgatgccacttc-3'	<b>MCP-1</b>	Reverse: 5'-attgggtccgatccagggt-3'
<b>SR-B1</b>	Forward: 5'-gcaaattggcctgttgtt-3' Reverse: 5'-aggattcggtgtcatgaag-3'	<b>mCSF</b>	Forward: 5'-gaccctcgagtcaacagagc-3' Reverse: 5'-gagggggaaaactttgcttc-3'
<b>ACAT1</b>	Forward: 5'-ccagatgtgggtgaaaga -3' Reverse: 5'-attcgtgccaatggcttaac -3'	<b>CCR1</b>	Forward: 5'-aagagcctgaagcagtggaa-3' Reverse: 5'-cagattgtagggggtccaga-3'
<b>NPC1</b>	Forward: 5'-gtgaaattgcgactggagat-3' Reverse: 5'-acggacatctggacaggaac -3'	<b>CCR2</b>	Forward: 5'-tggctgtttgcctctcta -3' Reverse: 5'-cctacagcgaaacagggtgt -3'
<b>HSL</b>	Forward: 5'-gctttctcgagggtgatg -3' Reverse: 5'-acactgaggcctgtctcggt-3'	<b>CCR3</b>	Forward: 5'-cacaaggccatccgtcttat-3' Reverse: 5'-tgccacattctgtggaaaa -3'
<b>Ap2</b>	Forward: 5'-agcccaacatgtatcagc -3' Reverse: 5'-tcgactttccatccacttc -3'	<b>CCR5</b>	Forward: 5'-gtgttgccctctccaga-3' Reverse: 5'-cgaaacagggtgtggagaat-3'
		<b>iNOS</b>	Forward: 5'-cacctggagttcacccagt-3' Reverse: 5'-accactcgacttggatgc -3'

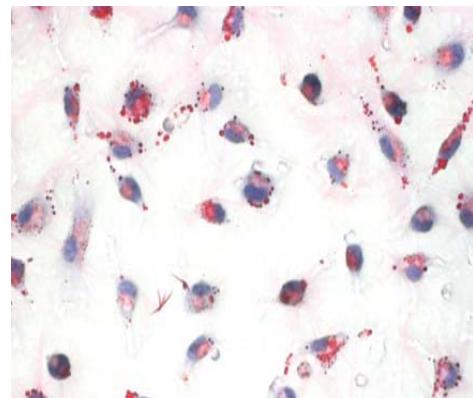


Online Figure I/R2

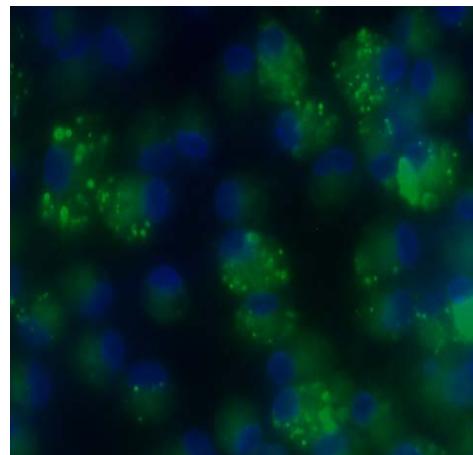
**a** **ADFP<sup>+/+</sup>**



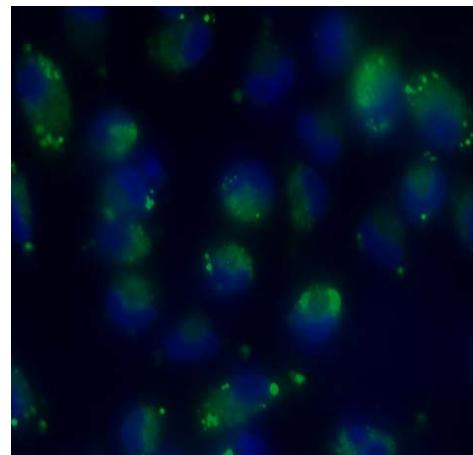
**ADFP<sup>-/-</sup>**



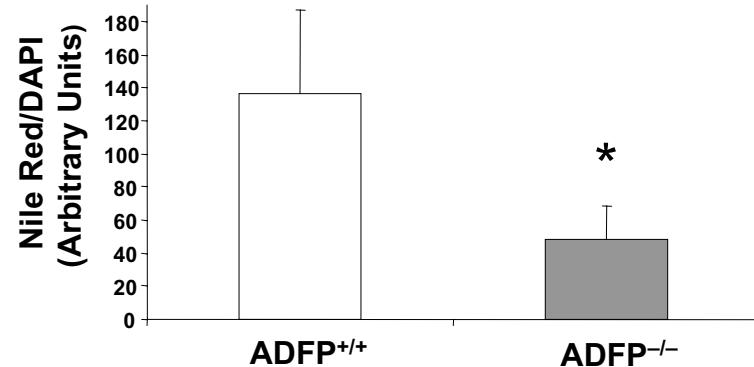
**b** **ADFP<sup>+/+</sup>**



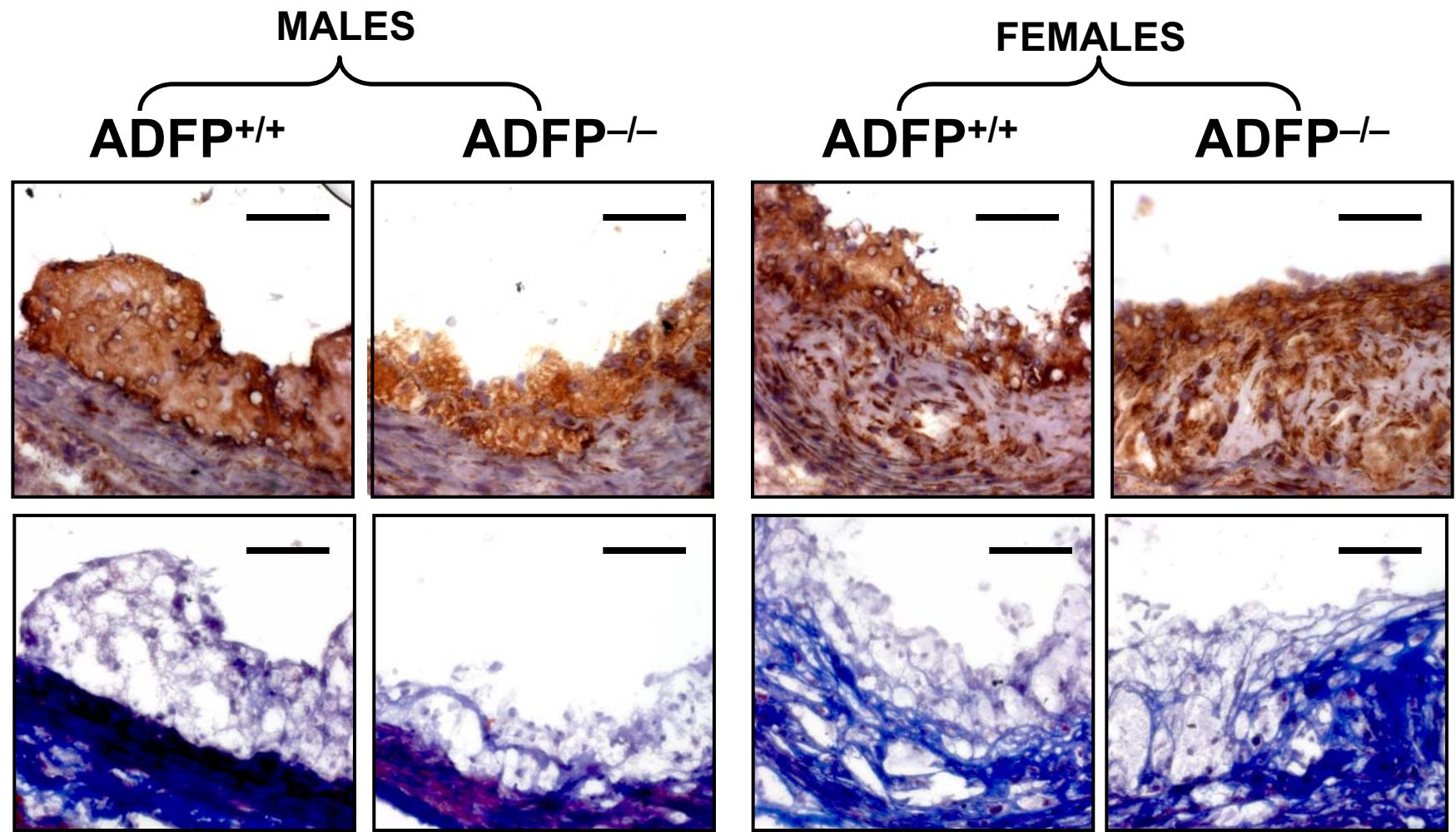
**ADFP<sup>-/-</sup>**



**C**

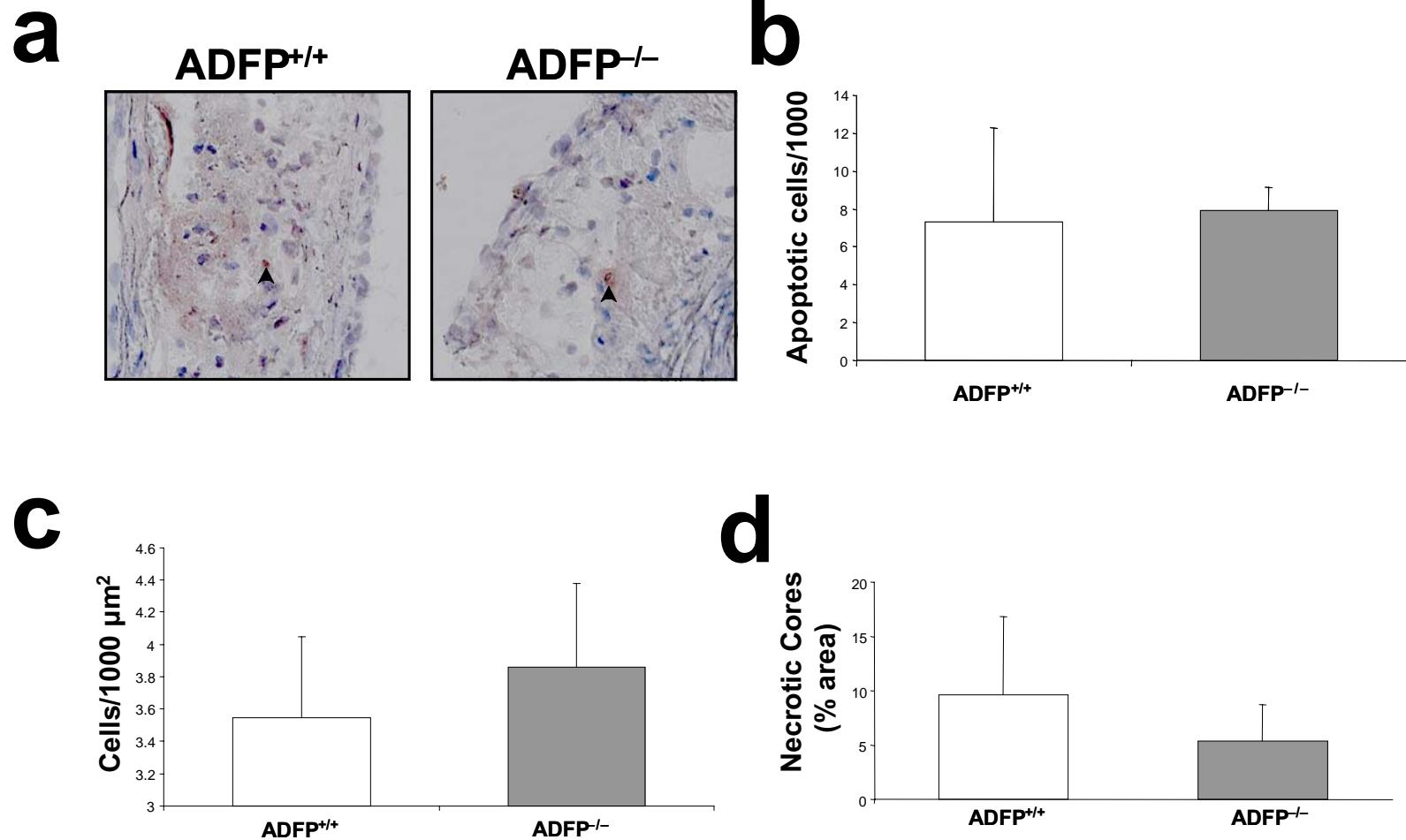


Online Figure II/R2

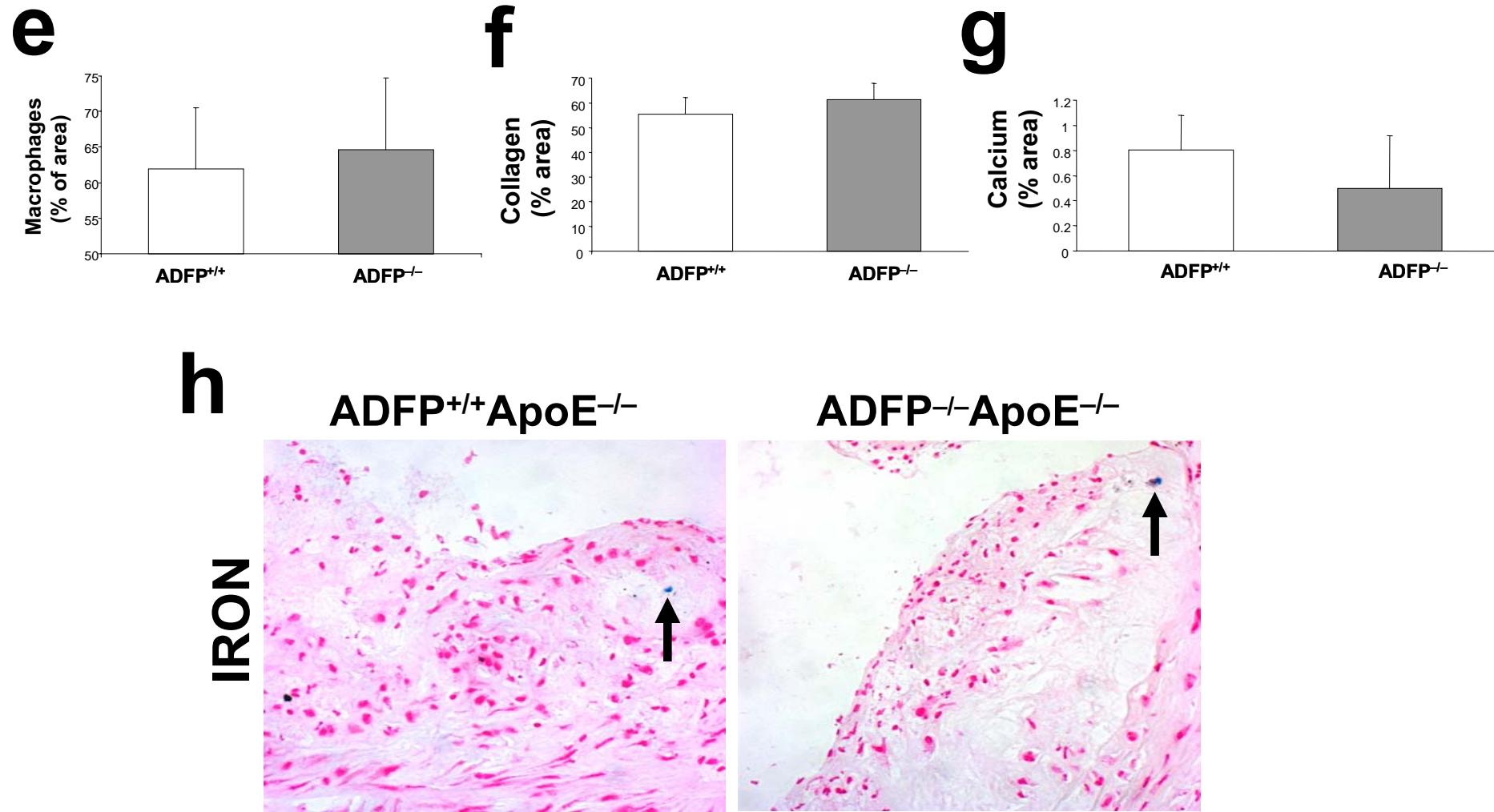


— =50μm

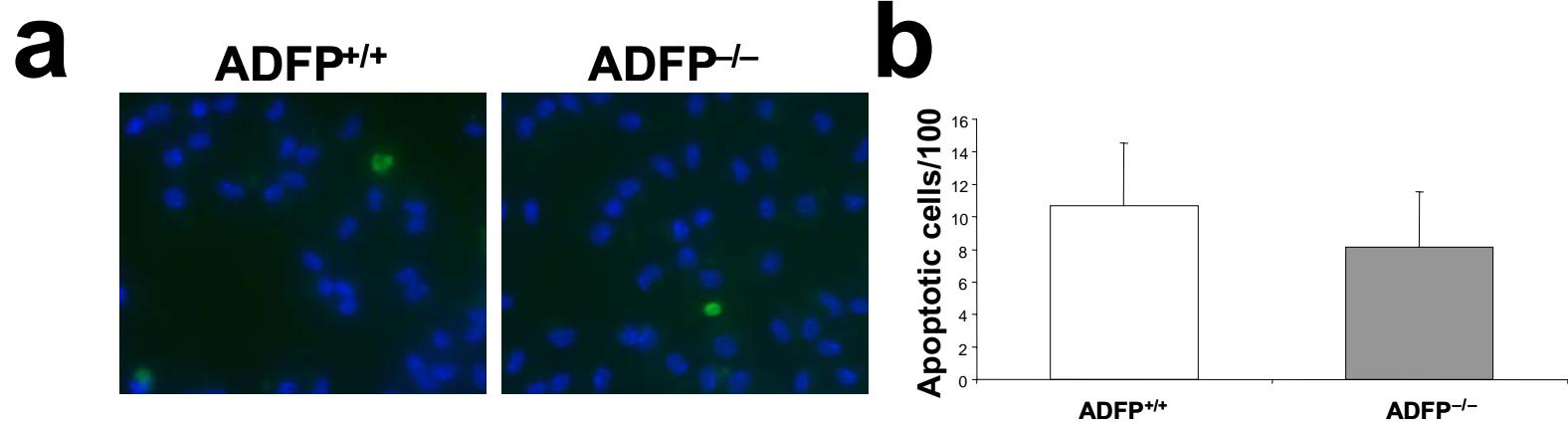
Online Figure III/R2



Online Figure IV/R2

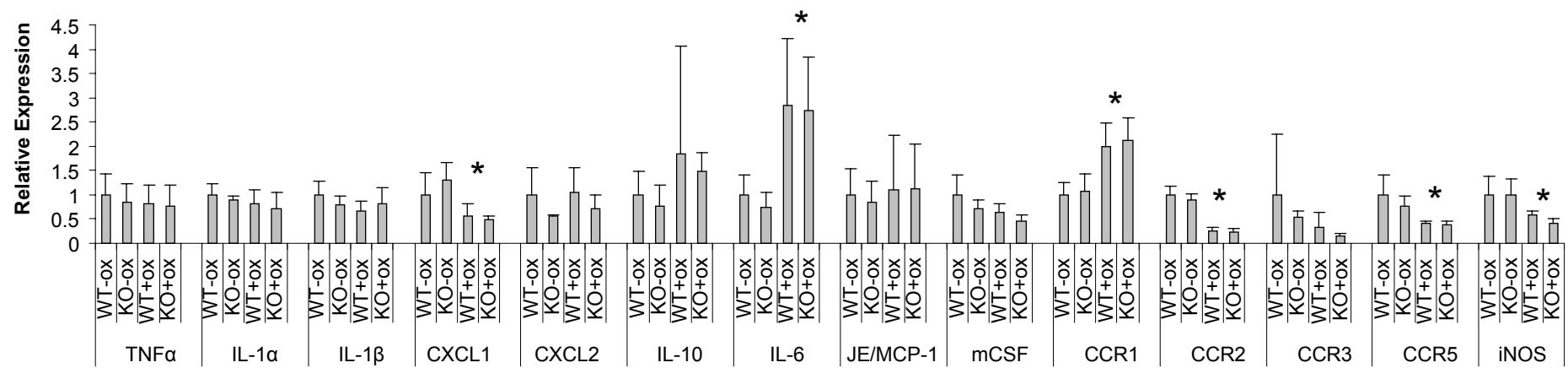


Online Figure IV/R2



Online Figure V/R2

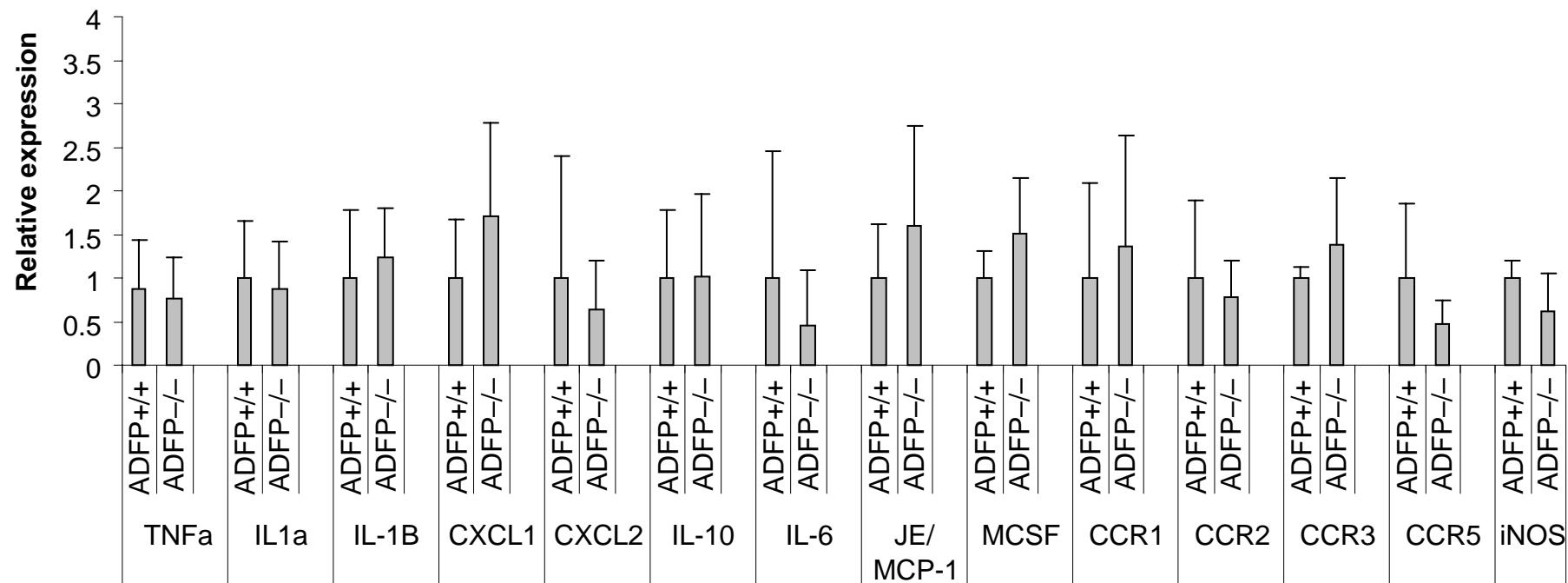
**Inflammatory markers in peritoneal macrophages from ADFP<sup>+/+</sup> and ADFP<sup>-/-</sup> mice**



\*=p<0.05 vs. non treated with oxLDL

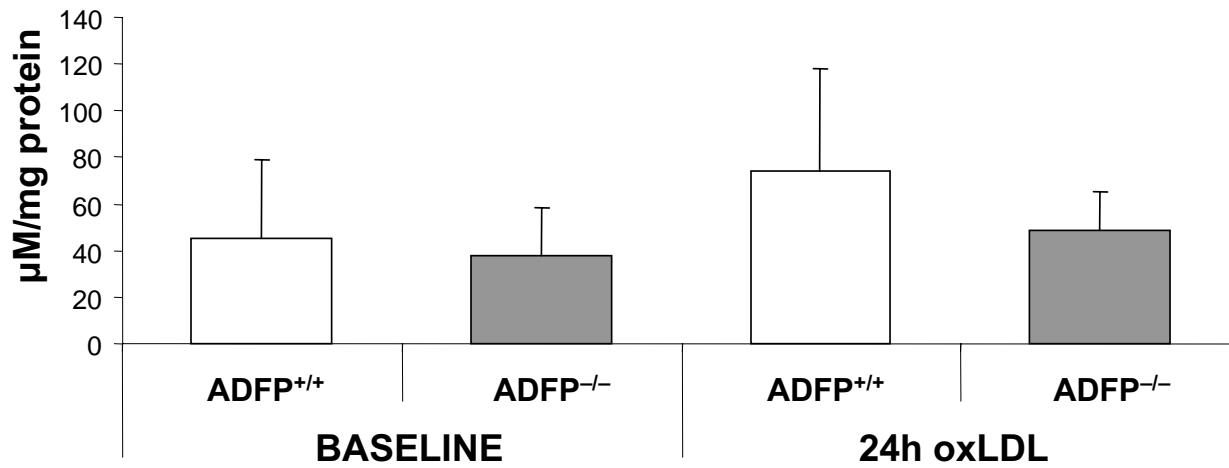
**Online Figure VI/R2**

## Inflammatory markers in aortic sinuses of ADFP<sup>+/+</sup>/apoE<sup>-/-</sup> and ADFP<sup>-/-</sup>/apoE<sup>-/-</sup> mice

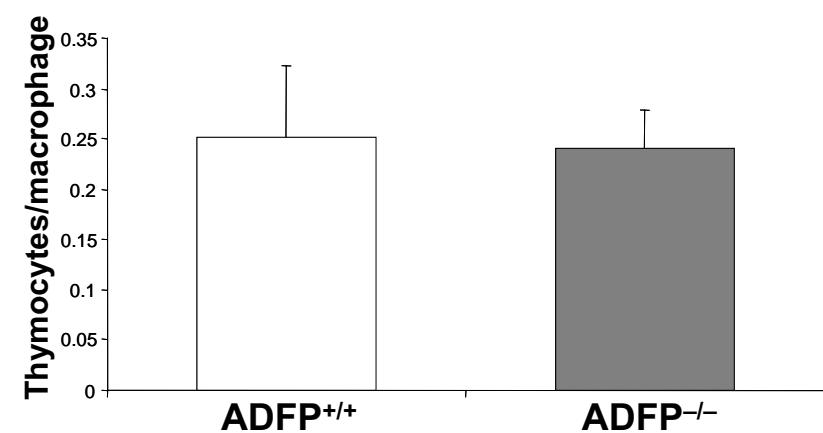
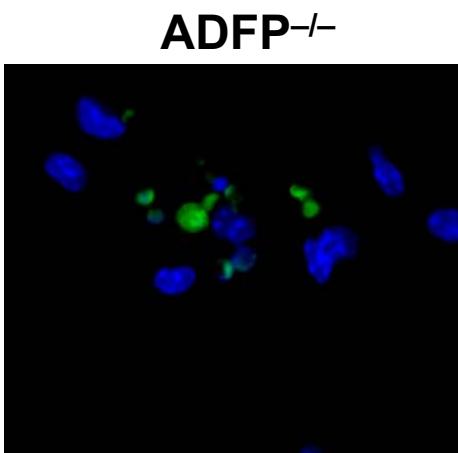
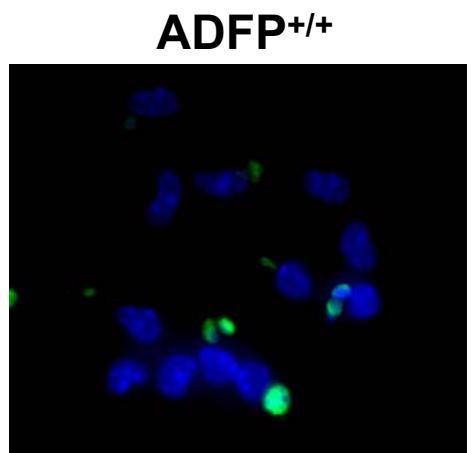


Online Figure VII/R2

## NO<sub>2</sub>-Production



Online Figure VIII/R2



**Online Figure IX/R2**