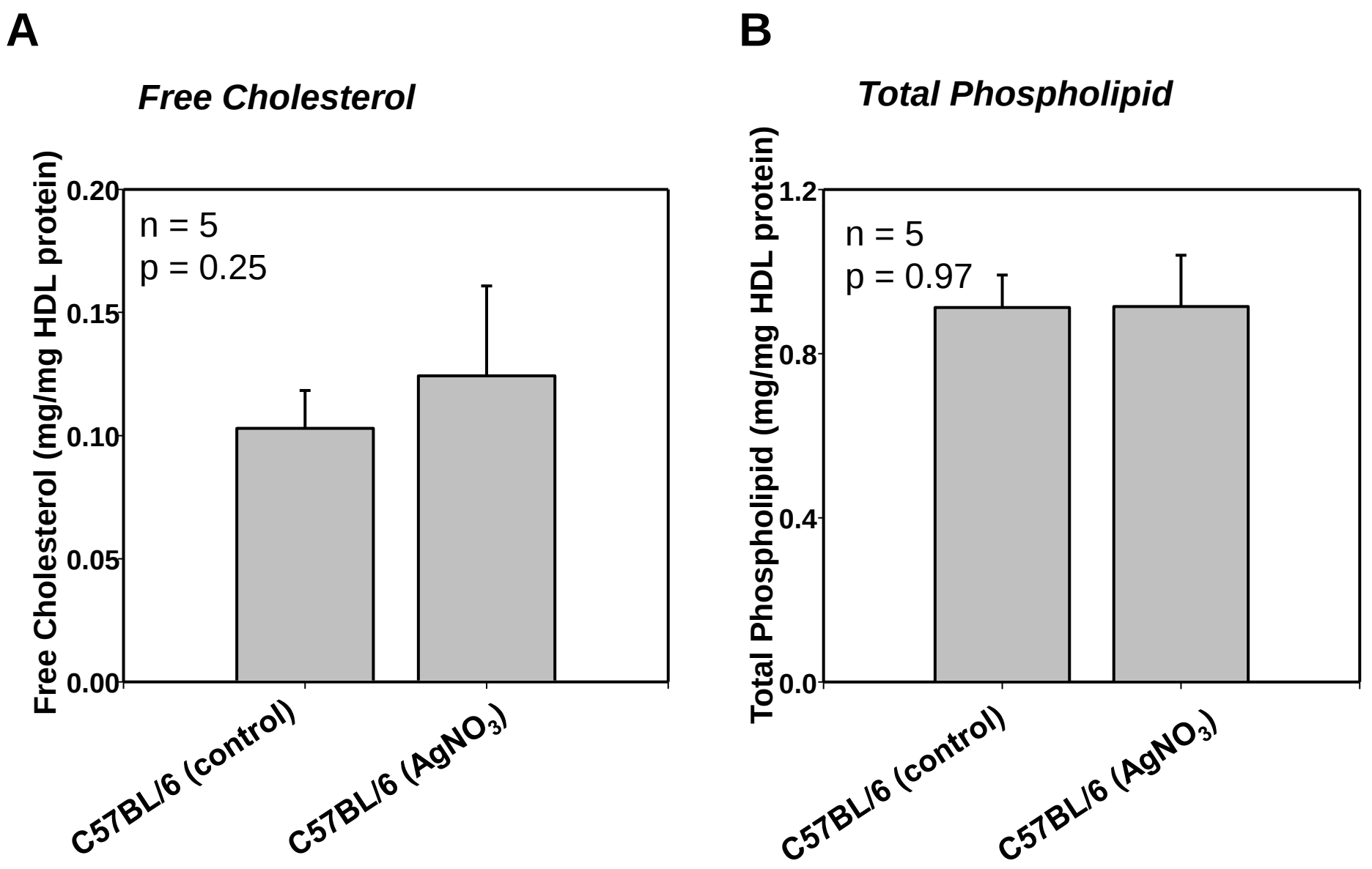
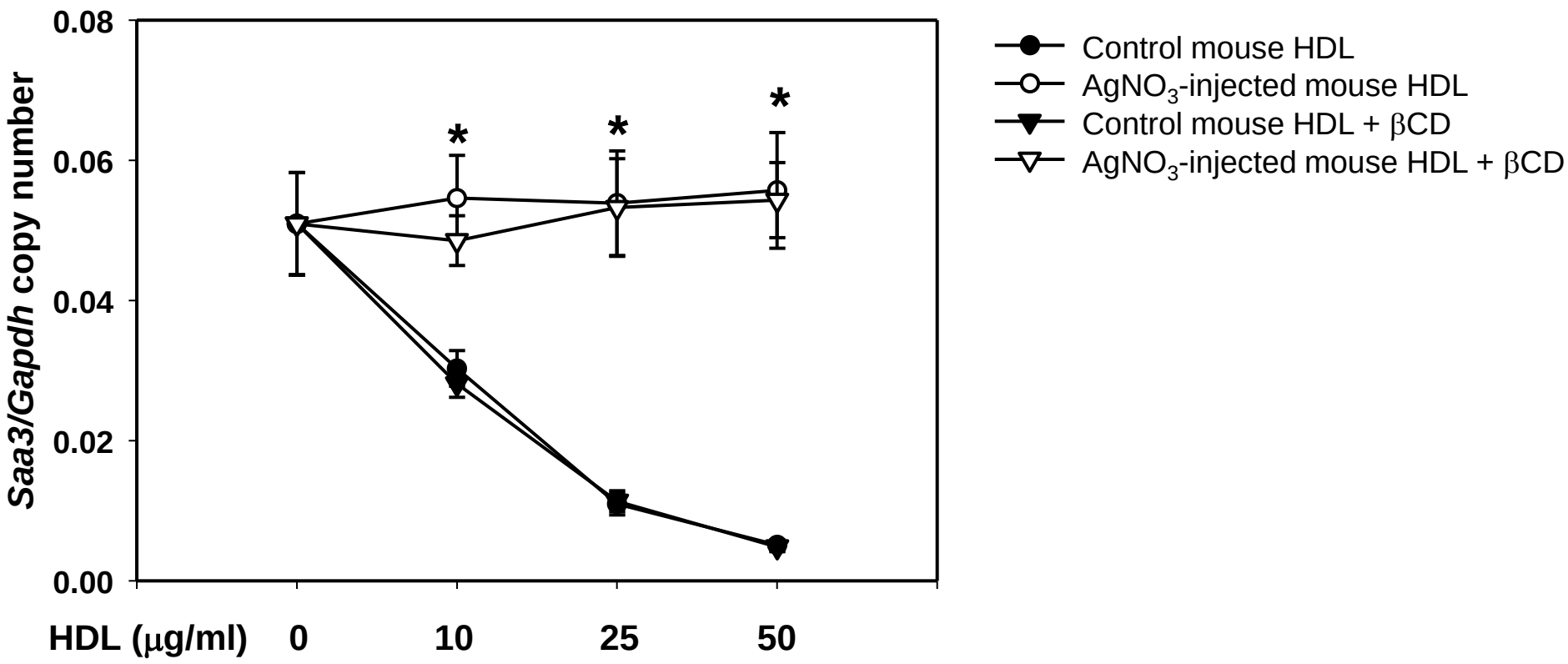
Supplemental Table 1. Demographic Features of Study Subjects with Systemic Lupus Erythematosus.

	Low CRP Mean ± SD	High CRP Mean ± SD	P value
Female	8	8	
Male	2	0	
Age (yrs)	35.38	38.75	
BMI (kg/m^2)	24.17 ± 4.2	36.8 ± 10.9	0.005406112
SLEDAI*	5.12 ± 5.54	6.37 ± 5.85	0.868877746
Medications			
Hydroxychloroquine	6	10	
Cellcept	3	2	
Methotrexate		1	
Azathioprine		1	
Prednisone	4	5	
Cholesterol (mg/dL)	184.8 ± 41.3	183.25 ± 62.2	0.7809081
HDL (mg/dL)	65.7 ± 28.9	65.5 ±46.9	0.739861717
LDL (mg/dL)	107.46 ± 33.5	98.9 ± 46.48	0.543352047
Triglycerides (mg/dL)	95 ± 63.89	157.62 ± 102.07	0.88150527

SLEDAI= Systemic Lupus Erythematosus Disease Activity





Supplemental Figure I. Free cholesterol and total phospholipid contents are not changed in HDL from $AgNO_3$-injected mice, and free cholesterol in HDL is not responsible for the reduction of adipocyte inflammation.

HDL was isolated from the plasma of $AgNO_3$ or PBS-injected C57BL/6 mice. Free cholesterol (A) and total phospholipid (B) content were measured. To remove free cholesterol, HDL was incubated with methyl-β-cyclodextrin (βCD, 10 μmol/ml) and re-isolated. 3T3-L1 adipocytes were treated as described in the legend to Figure 1 for measurement of *Saa3* gene expression (C). Data represent mean ± SD. Data are representative of at least 3 independent experiments. **P* < 0.001 vs. C57BL/6 (control) HDL. ANOVA and Bonferroni post-hoc test.

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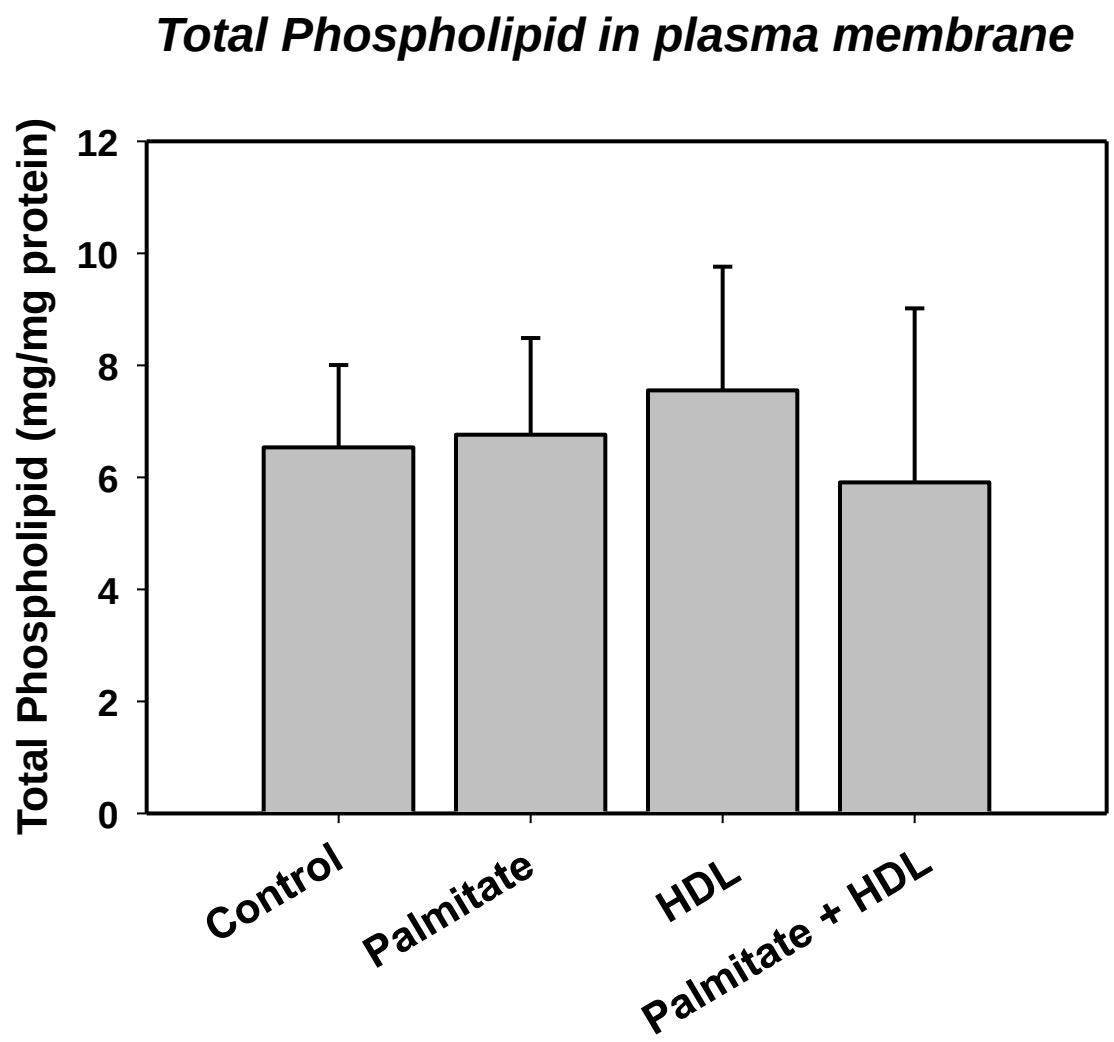
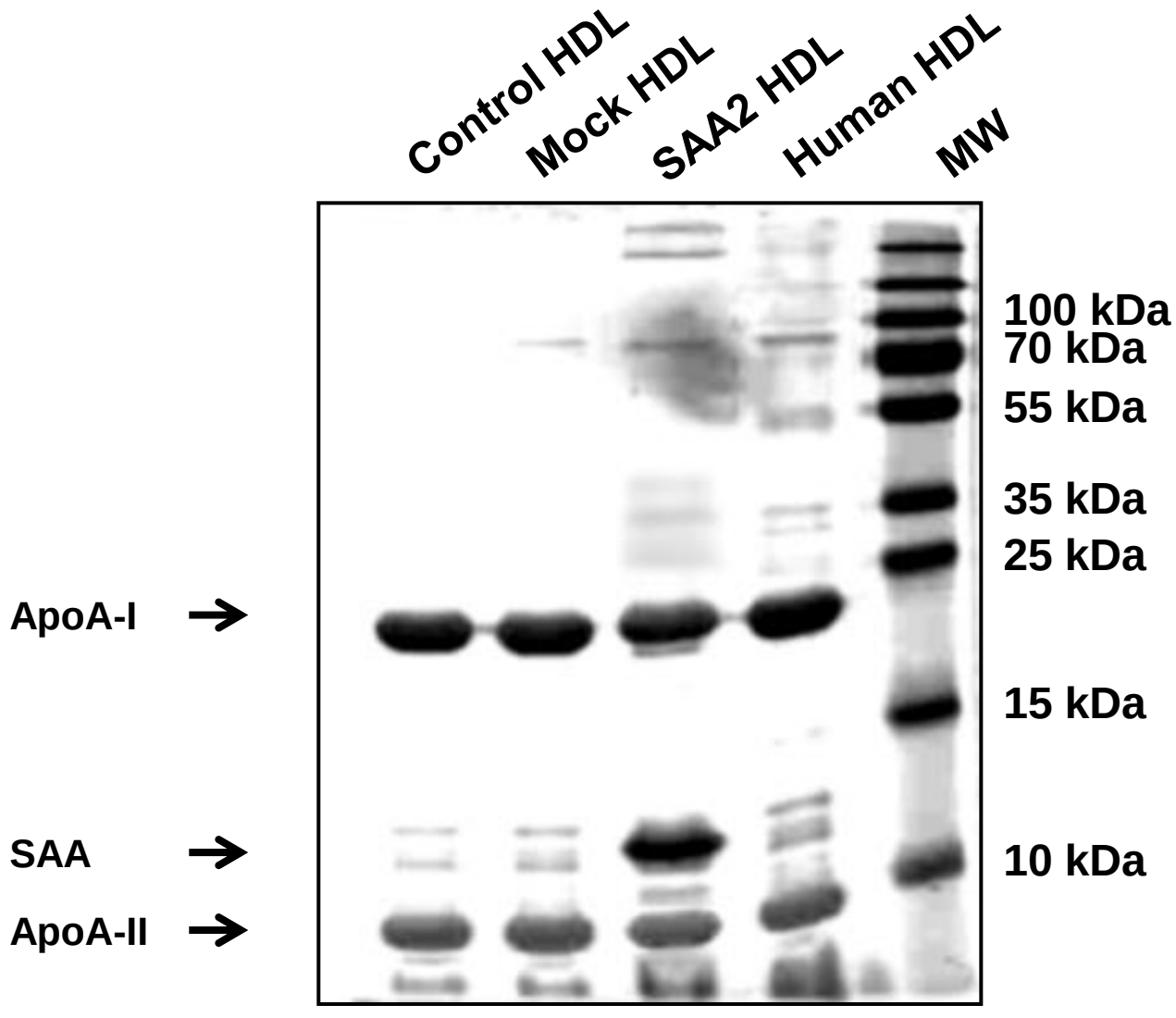


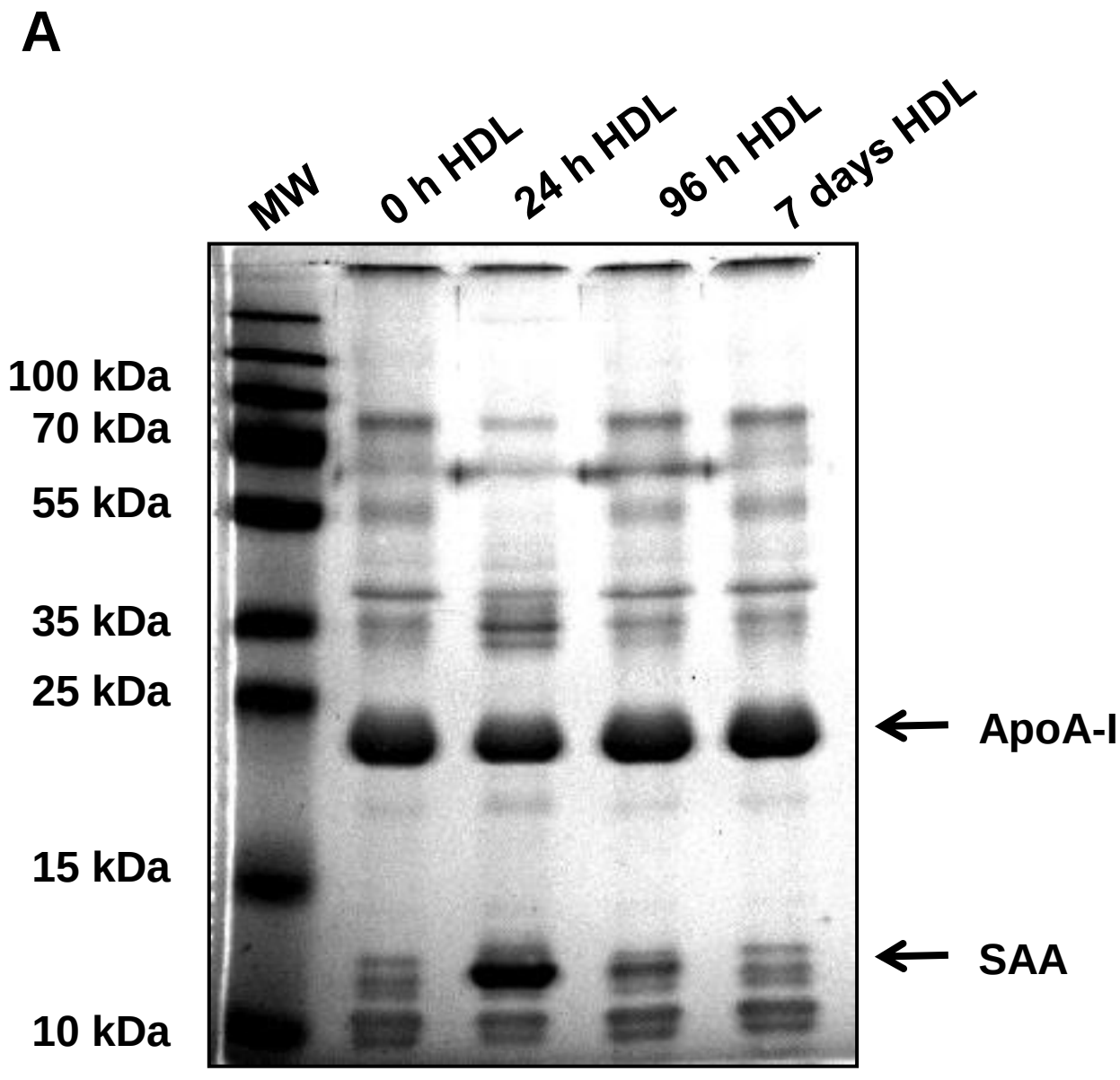
Supplemental Figure II. Plasma membrane phospholipid content in is not changed by exposure of adipocytes to palmitate or HDL.

HDL was isolated from the plasma of PBS-injected C57BL/6 mice (n=6). 3T3-L1 adipocytes were treated as described in the legend to Figure 1, after which plasma membranes were isolated for determination of their phospholipid content. ANOVA and Bonferroni post-hoc test.



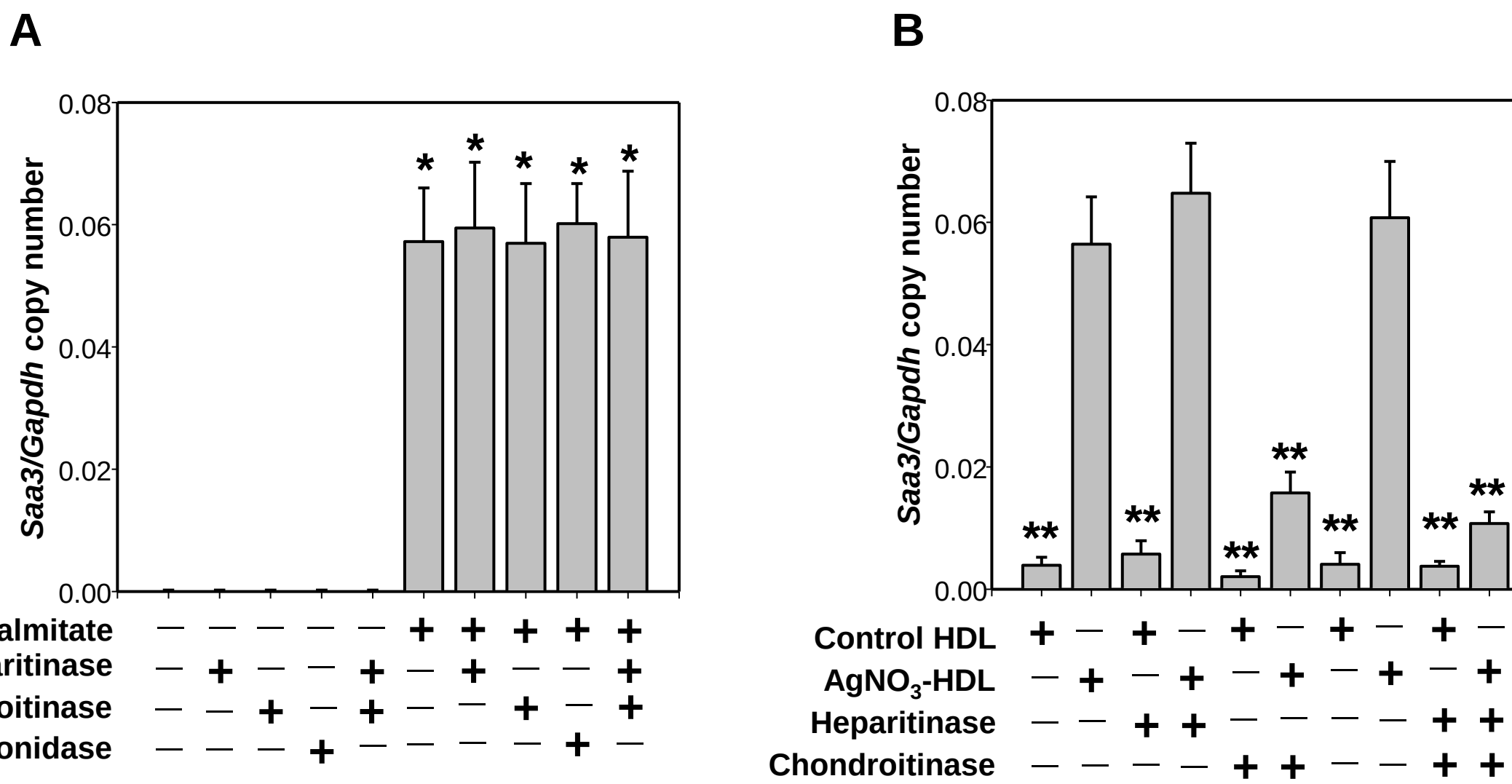
Supplemental Figure III. Enrichment of HDL with SAA after exposure to SAA2.1 overexpressing 293 HEK cells

SDS-PAGE analysis of HDL from healthy humans re-isolated after exposure to HEK 293 cells with lentiviral overexpression of mouse SAA2.1 (SAA2-HDL), mock vector (mock HDL) or to non-transduced HEK 293 cells (control HDL). Shown are apoA-I, apoA-II and SAA bands in 10-20% SDS-PAGE gels stained with Coomassie blue. SDS-PAGE is a representative image of 3 independent experiments.



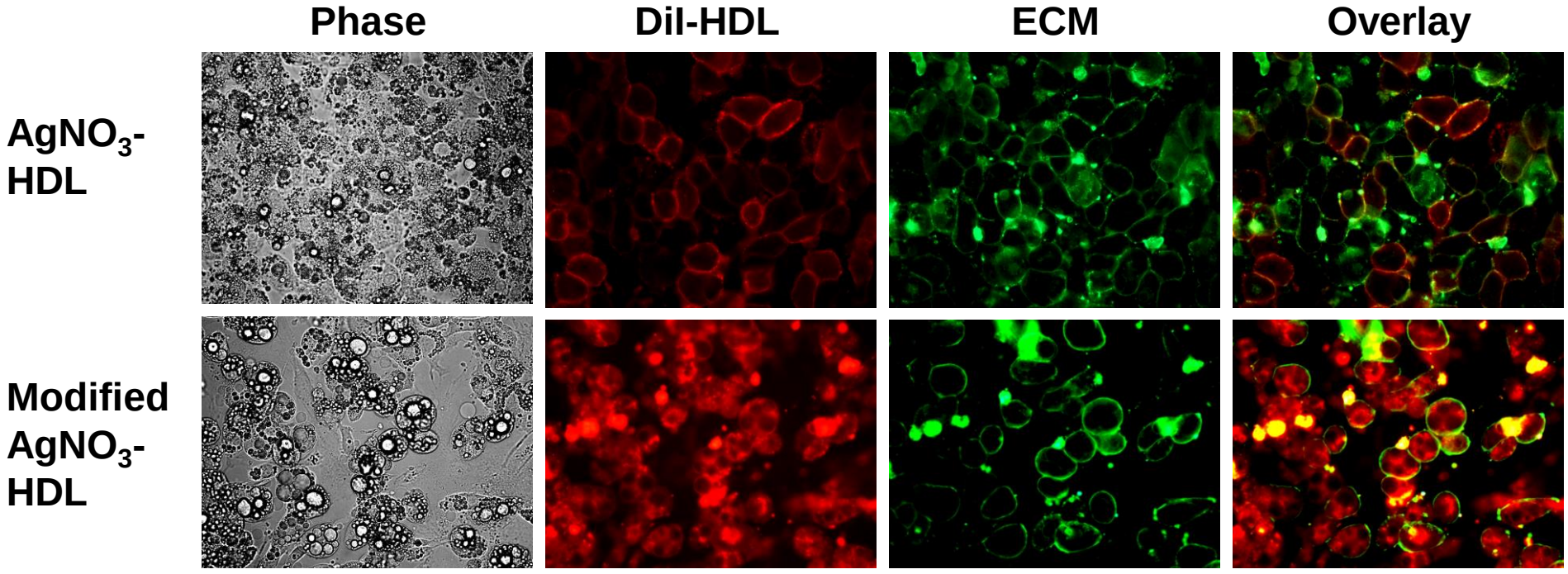
Supplemental Figure IV. HDL isolated 96 h and 7 days later from $AgNO_3$-injected mice restores its anti-inflammatory effect on adipocytes.

SDS-PAGE analysis of HDL isolated 0, 24, 96 h and 7 days later from $AgNO_3$-injected C57BL/6 mice (A). ApoA-I and SAA bands in 10-20% SDS-PAGE gels stained with Coomassie blue are indicated. SDS-PAGE is a representative image of 3 independent experiments. 3T3-L1 adipocytes were treated with each HDL preparation as described in the legend to Figure 1 for measurement of *Saa3* gene expression (B). Data represent mean ± SD and are representative of at least 3 independent experiments. *$P < 0.001$ vs. 0 h $AgNO_3$-injected mouse HDL. ANOVA and Bonferroni post-hoc test.



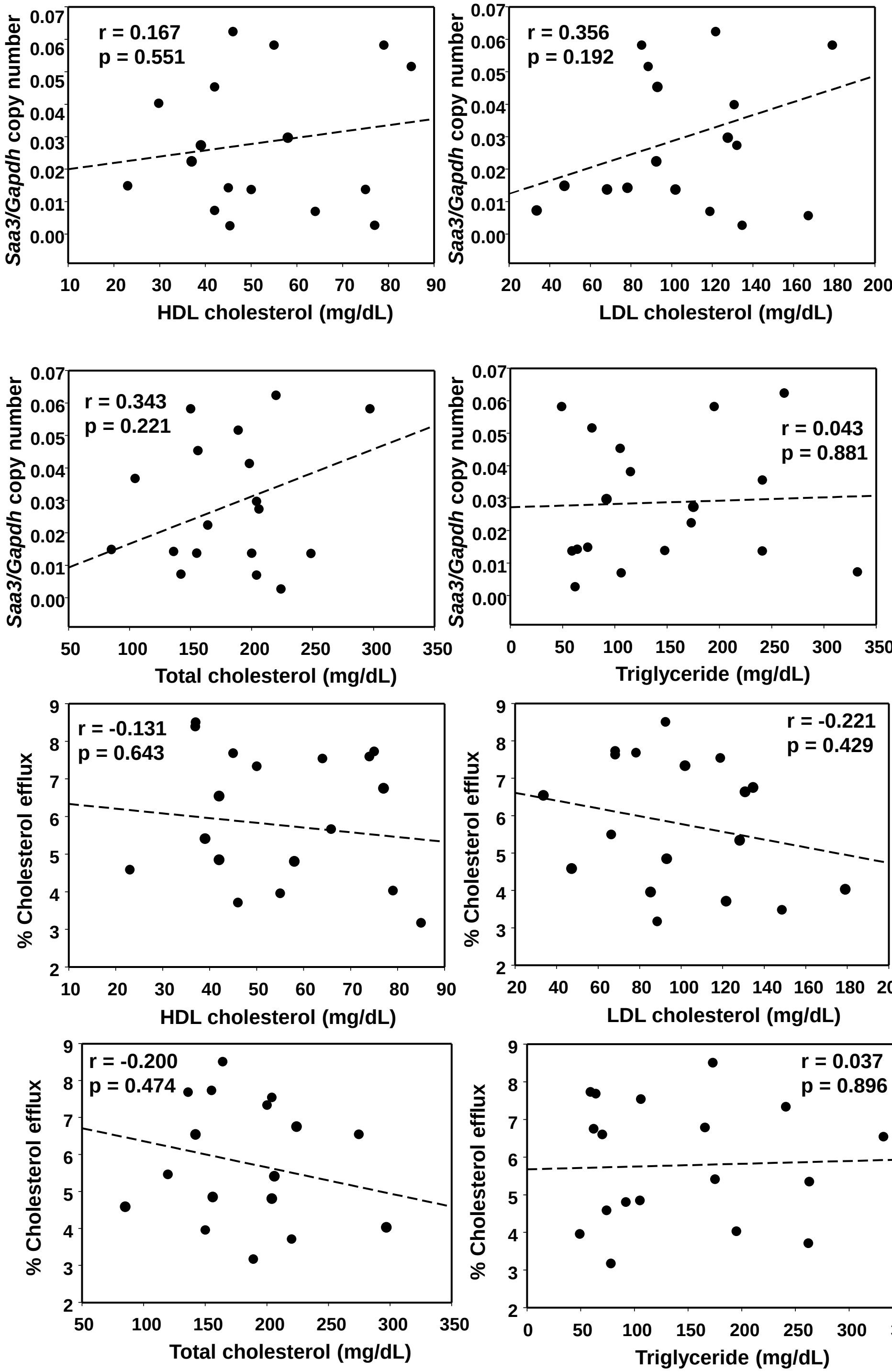
Supplemental Figure V. Enzymatic digestion of the ECM restores $AgNO_3$-HDL's ability to Inhibit palmitate-induced *Saa3* gene expression.

The cell surface associated ECM of 3T3-L1 adipocytes was digested with heparitinase, chondroitin ABC lyase (chondroitinase) or hyaluronidase for 1h and the adipocytes were incubated with or without palmitate (250 μmol/L) for 24h prior to measurement of *Saa3* gene expression (A). HDL was isolated from the plasma of $AgNO_3$ or PBS-injected C57BL/6 mice (B). The cell surface associated ECM of 3T3-L1 adipocytes was digested with heparitinase, chondroitin ABC lyase or hyaluronidase for 1h, and then 3T3-L1 adipocytes were pre-exposed to HDL (50 μg protein/ml) for 6h (B). After the HDL was removed, the cells washed, the adipocytes were incubated with palmitate (250 μmol/L) for 24h prior to measurement of *Saa3* gene expression (B) as described in methods. Data represent mean ± SD. Data are representative of at least 3 independent experiments. . *$P < 0.001$ vs. non-treatment, **$P < 0.001$ vs. $AgNO_3$-HDL. ANOVA and Bonferroni post-hoc test.



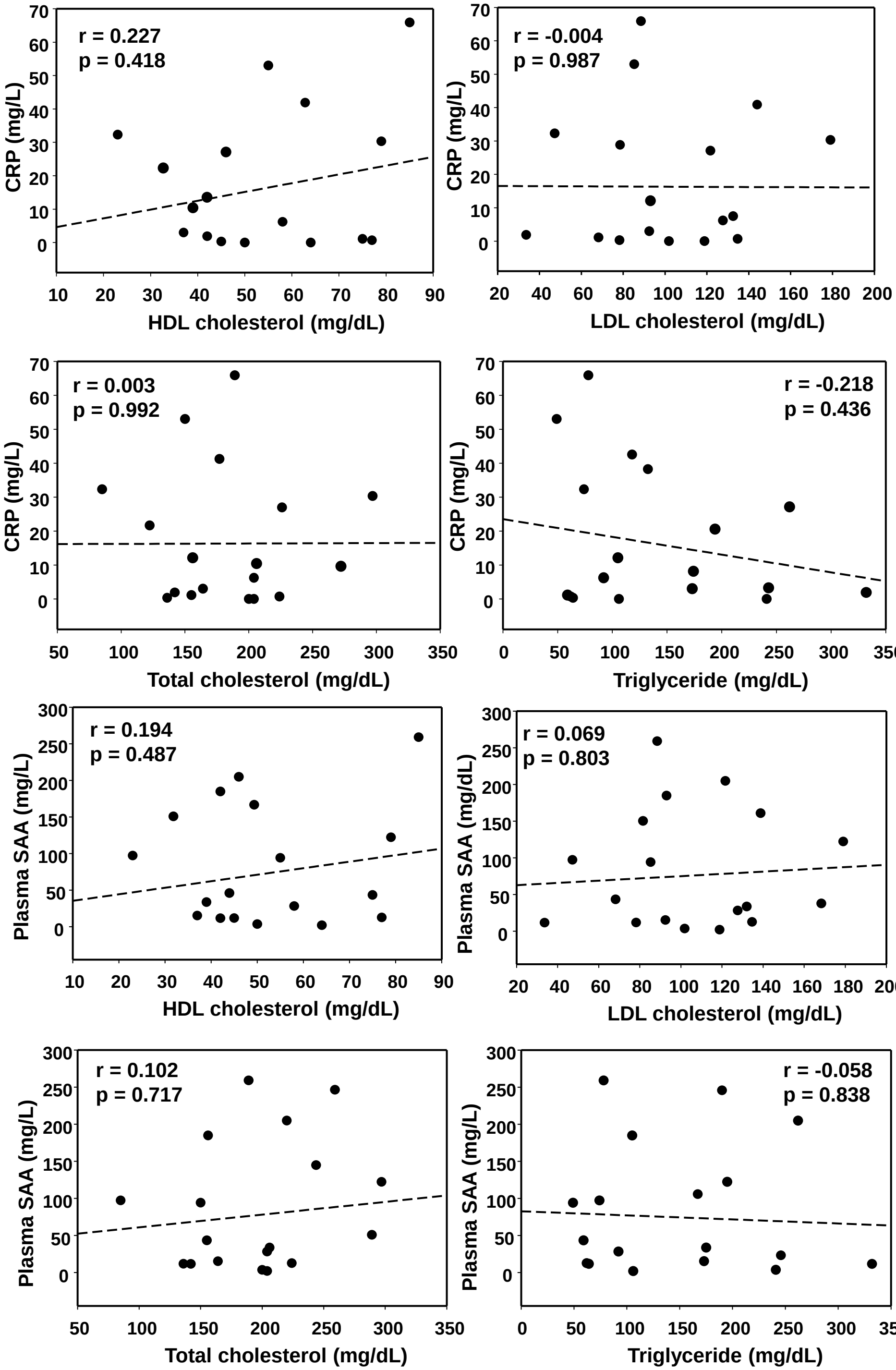
Supplemental Figure VI. Modified HDL isolated from $AgNO_3$-injected mice doesn't co-localize with the adipocyte cell surface.

Arginine and lysine residues in apolipoproteins of HDL from $AgNO_3$-injected C57BL/6 mice were modified chemically and labeled with DiI (red) as described in Methods. 3T3-L1 adipocytes were exposed to these HDL preparations as described in the legend to Figure 4. Original magnification ×400. Modified HDL from $AgNO_3$-injected mice exhibited much less co-localization with the adipocyte cell surface than control HDL from $AgNO_3$-injected mice. Representative fluorescence images of 3 independent experiments are shown.



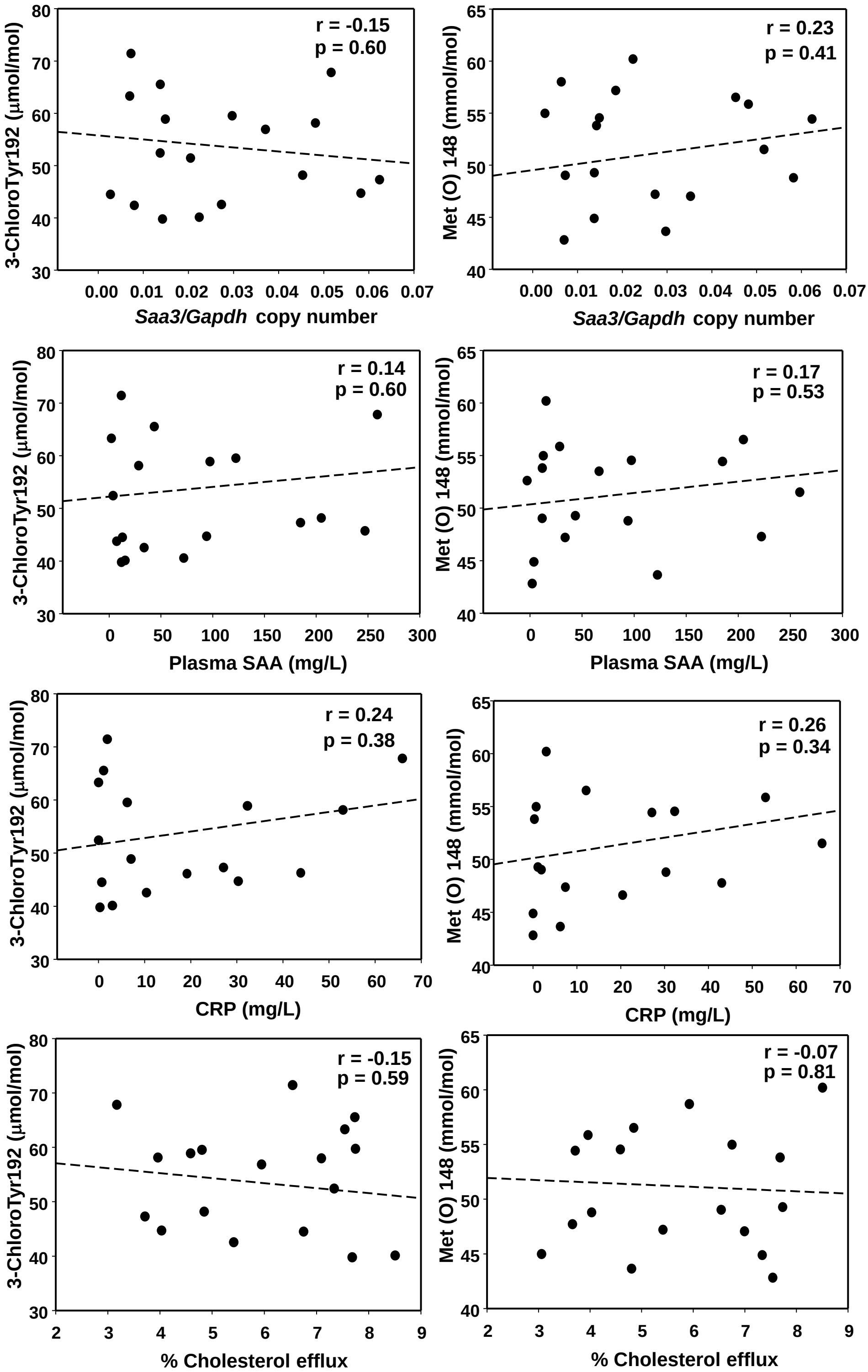
Supplemental Figure VII A. Plasma lipids and lipoproteins do not correlate with the anti-inflammatory properties of HDL or its ability to stimulate cholesterol efflux from adipocytes in patients with SLE.

HDL was isolated from SLE patient (n=18) and lipids and lipoppoteins were analyzed as described in Methods. Levels of HDL cholesterol, LDL cholesterol, total cholesterol and triglyceride contents did not correlate with *Saa3* gene expression or cholesterol efflux.



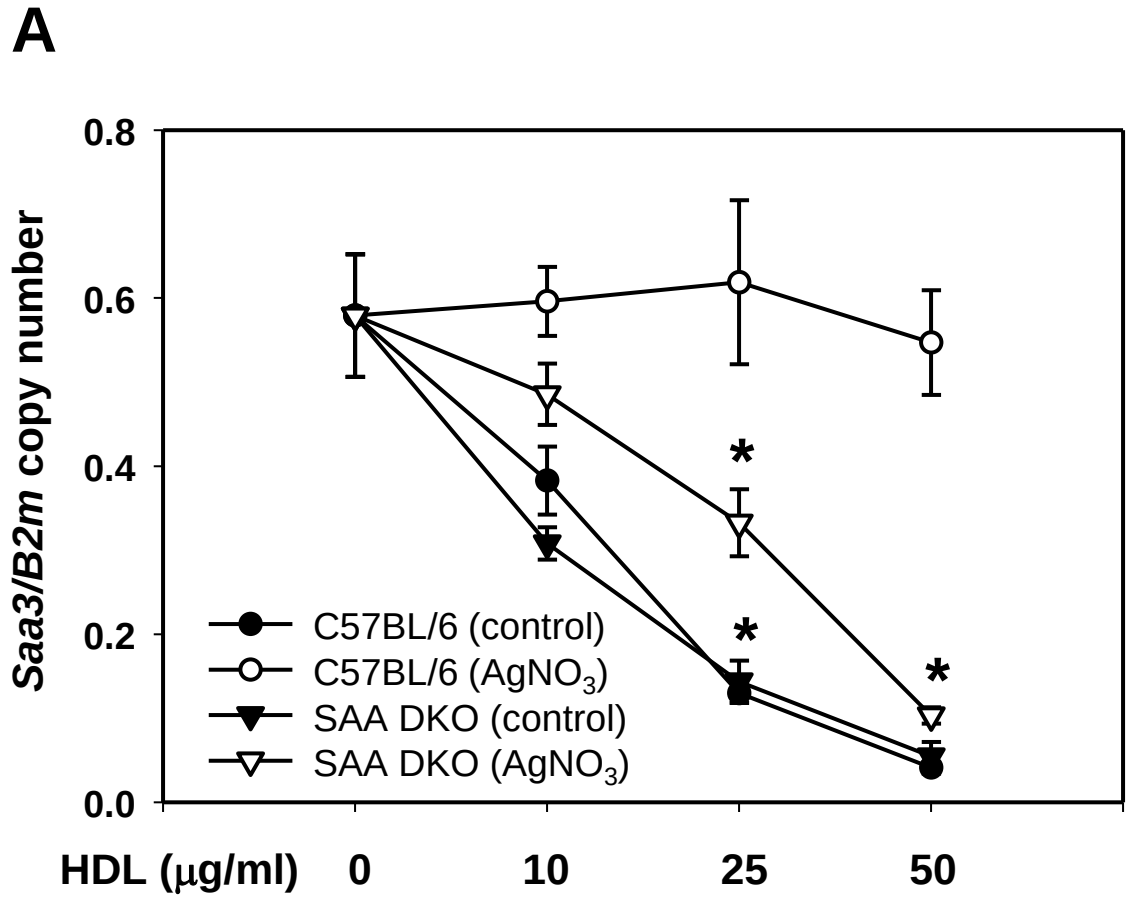
Supplemental Figure VII B. Plasma lipids and lipoproteins do not correlate with inflammatory markers (CRP and SAA) in patients with SLE.

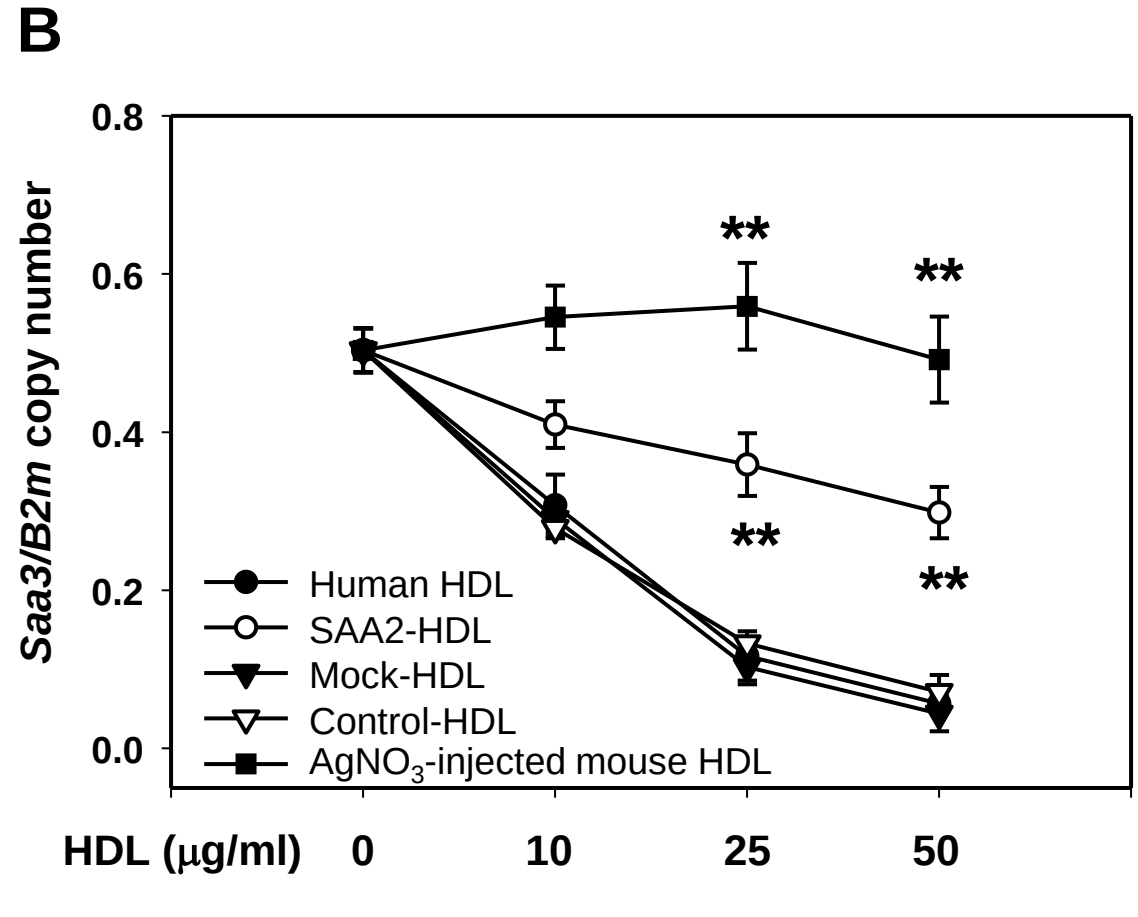
HDL was isolated from SLE patient (n=18) and lipid lipids and lipoproteins were analyzed as described in Methods. Levels of HDL cholesterol, LDL cholesterol, total cholesterol and triglyceride did not correlate with plasma levels of CRP or SAA.



Supplemental Figure VIII. Indices of HDL oxidation do not correlate with the anti-inflammatory properties of HDL, its ability to stimulate cholesterol efflux from adipocytes or inflammatory markers in patients with SLE.

HDL was isolated from SLE patient (n=18) and the extent of oxidation of apoA-I in HDL was analyzed as described in Methods. Levels of chlorinated tyrosine 192 and oxidized methionine 148 in apoA-I from did not correlate with *Saa3* gene expression, cholesterol efflux or plasma levels of CRP or SAA.





Supplemental Figure IX. Normalization with a second housekeeping gene, β-2-microglobulin (*B2m*).

Figure 2A (A) and Figure 3A (B) panels were normalized with a second house keeping gene,*B2m*. Data represent mean ± SD. Data are representative of at least 3 independent experiments. **P* < 0.001 vs. C57BL/6 ($AgNO_3$) HDL, ***P* < 0.001 vs. Control-HDL. ANOVA and Bonferroni post-hoc test.

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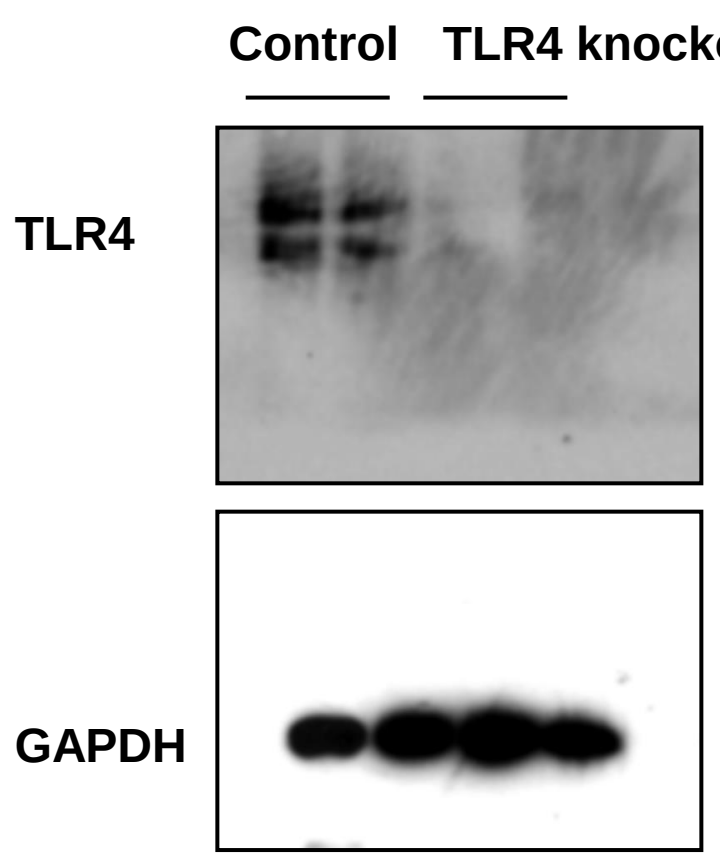

Supplemental Figure X. The specificity of the TLR4 antibody.

Epididymal fat isolated from control (*Ldlr*$^{-/-}$) and TLR4 knockout (*Ldlr*$^{-/-}$*Tlr4*$^{-/-}$) mice was analyzed by immunohistochemistry using anti-TLR4 and GAPDH antibodies. Western blotting are representative images of 3 independent experiments.