

SUPPLEMENTAL MATERIAL

Table S1

Protein	EPA 10 μ M (IL-6 vs EPA + IL-6)		EPA 40 μ M (IL-6 vs EPA + IL-6)	
	Log2 Fold Change	<i>p</i> -value	Log2 Fold Change	<i>p</i> -value
DDAH1	-0.131	0.046	-0.0937	0.035
HMGB1	-0.126	0.025	-0.17	0.0002
HMOX1	-0.269	0.002	-1.04	2.12×10^{-9}
ITGAV	0.451	0.0006	0.0858	0.010
ITGB1	0.346	9.57×10^{-5}	0.169	0.0004
NQO1	-0.452	1.66×10^{-6}	-0.377	2.29×10^{-6}
PARK7	-0.255	0.001	-0.12	0.003
PRDX2	-0.239	0.002	-0.071	0.044
SNCA	-0.311	0.009	-0.204	1.99×10^{-5}
TXN	-0.539	0.006	-0.238	1.35×10^{-5}

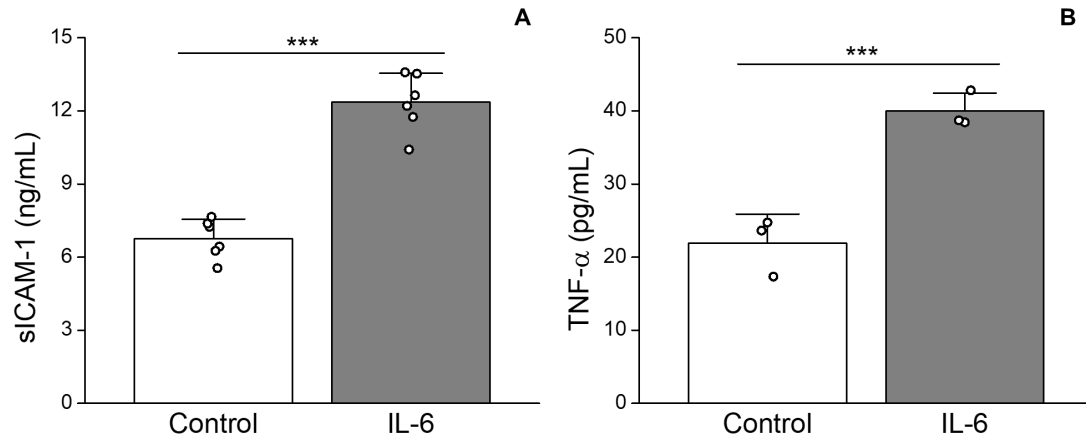
Summary of Log2 Fold Change and P-Values of Anti-Inflammatory and Antioxidant Response Proteins Modulated by EPA relative to IL-6 at 10 and 40 μ M. the sign of the fold change value indicates direction of change. Key: DDAH1, dimethylarginine dimethylaminohydrolase-1; HMGB1, high mobility group box protein 1; HMOX1, heme oxygenase-1; ITGAV, integrin α V; ITGB1, integrin B1; NQO1, NAD(P)H quinone oxidoreductase-1; PARK1, Parkinson disease protein 7; PRDX2, peroxiredoxin-2; SNCA; α -synuclein; TXN, thioredoxin.

Table S3

Fatty Acid		Treatment		
		Control (mg/g protein)	IL-6 (mg/g protein)	EPA + IL-6 (mg/g protein)
14:0	Myristic	7.63 ± 0.37	7.68 ± 0.38	8.65 ± 0.14
16:0	Palmitic	60.09 ± 2.86	59.62 ± 3.30	66.02 ± 0.72
<i>trans</i> -16:1n7	Palmitelaidic	1.13 ± 0.06	1.07 ± 0.13	1.00 ± 0.03
<i>cis</i> -16:1n7	Palmitoleic	6.33 ± 0.54	6.61 ± 0.21	6.71 ± 0.17
18:0	Stearic	40.80 ± 2.42	39.98 ± 2.43	43.87 ± 0.44
<i>trans</i> -18:1n9	Elaidic	0.95 ± 0.12	1.10 ± 0.13	0.93 ± 0.08
<i>cis</i> -18:1n9	Oleic	84.28 ± 4.76	82.53 ± 4.13	78.91 ± 2.23
<i>trans</i> -18:2n6	Linoelaidic	2.36 ± 0.08	2.47 ± 0.10	2.55 ± 0.07
<i>cis</i> -18:2n6	Linoleic	4.39 ± 0.32	4.69 ± 0.08	5.05 ± 0.08
18:3n3	α-Linolenic	0.03 ± 0.01	0.11 ± 0.04	0.07 ± 0.02
18:3n6	γ-Linolenic	0.11 ± 0.02	0.20 ± 0.05	0.35 ± 0.002* ‡
20:0	Arachidic	0.93 ± 0.04	1.09 ± 0.08	1.00 ± 0.04
20:1n9	Eicosenoic	1.54 ± 0.11	1.41 ± 0.19	0.91 ± 0.03*
20:2n6	Eicosadienoic	0.39 ± 0.04	0.36 ± 0.01	0.51 ± 0.05
20:3n6	Dihomo-γ-linolenic	4.77 ± 0.46	4.90 ± 0.10	5.29 ± 0.20
20:4n6	Arachidonic (AA)	17.61 ± 2.13	17.85 ± 0.41	17.23 ± 0.86
20:5n3	Eicosapentaenoic (EPA)	1.24 ± 0.14	1.28 ± 0.05	26.71 ± 1.28* ‡
22:0	Behenic	1.14 ± 0.05	1.14 ± 0.11	1.19 ± 0.17
22:4n6	Docosatetraenoic	2.93 ± 0.28	3.11 ± 0.20	3.54 ± 0.14
22:5n6	Docosapentaenoic ω6	0.59 ± 0.06	0.64 ± 0.04	0.52 ± 0.04
22:5n3	Docosapentaenoic ω3	5.86 ± 0.69	6.17 ± 0.36	29.42 ± 1.91* ‡
22:6n3	Docosahexaenoic	7.05 ± 0.86	7.41 ± 0.43	8.03 ± 0.52
24:0	Lignoceric	1.94 ± 0.08	2.13 ± 0.03	2.10 ± 0.08
24:1n9	Nervonic	1.28 ± 0.03	1.28 ± 0.20	1.16 ± 0.07
Eicosapentaenoic/Arachidonic Acid Ratio (EPA/AA)		0.07 ± 0.01	0.07 ± 0.003	1.55 ± 0.11* ‡

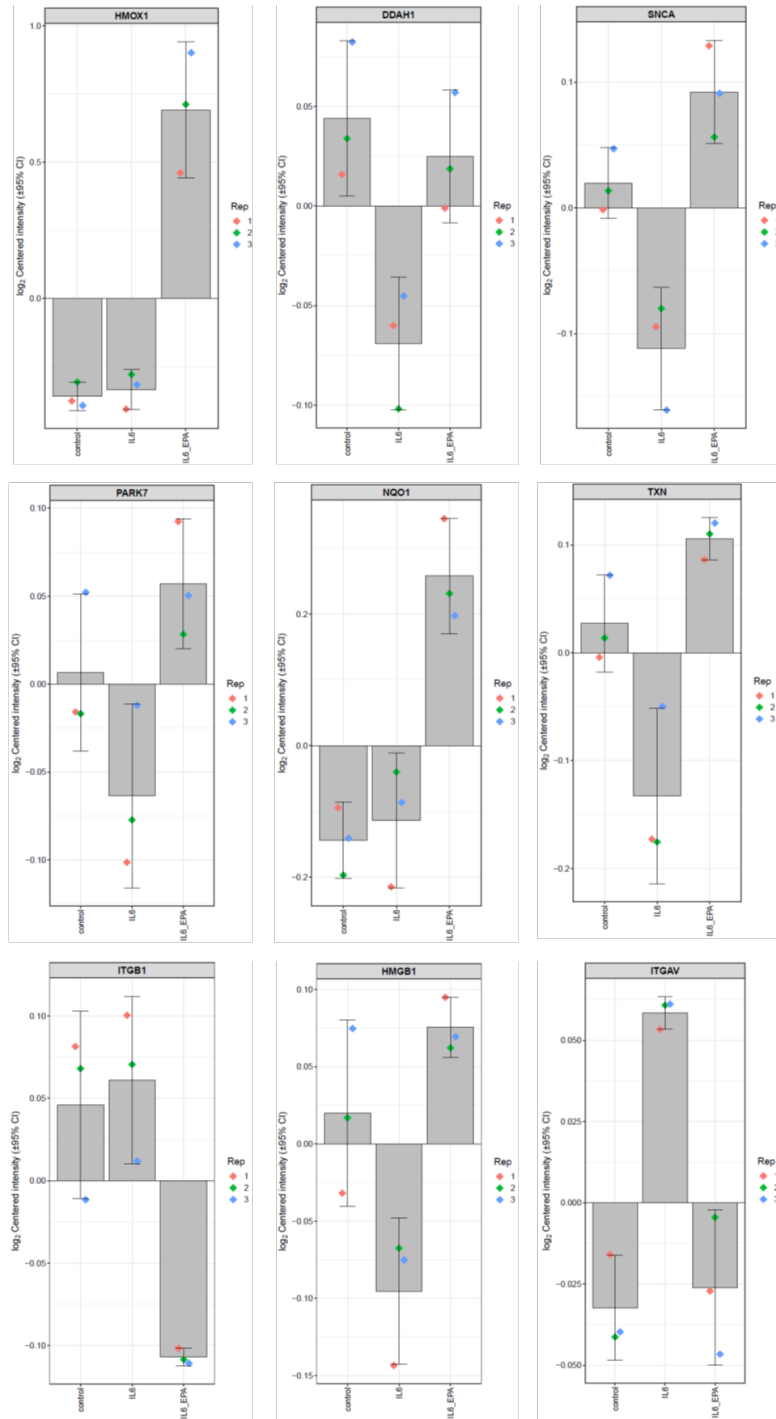
Summary of Fatty Acid Levels in HUVECs Following Treatment with IL-6 ± EPA. Results shown as mean ± SEM. Statistical analysis were carried out by one-way ANOVA followed by *post hoc* Tukey-Kramer multiple comparisons test between groups. **p*<0.05 vs control; ‡*p*<0.05 vs IL-6.

Figure S1



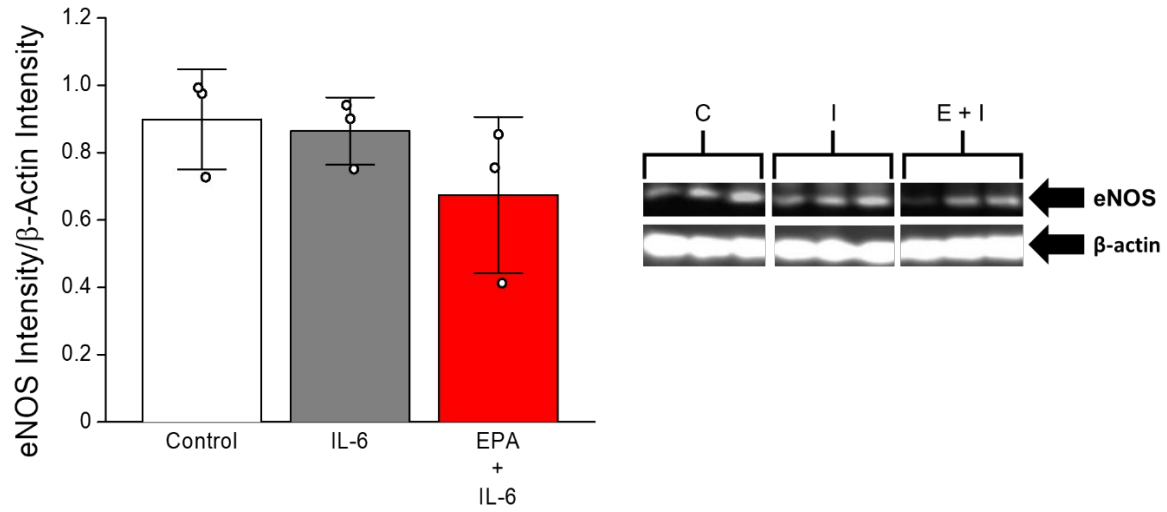
Release of (A) sICAM-1 and (B) TNF- α from HUVECs Challenged with IL-6. sICAM statistical indicators: *** $p < 0.0001$ versus control (Unpaired, two-tailed Student's T-test, $t = 9.529$, $df = 10$). TNF- α statistical indicators: *** $p = 0.0026$ versus control (Unpaired, two-tailed Student's t-test, $t = 6.682$, $df = 4$). Values are mean \pm SD (N = 3-6).

Figure S2



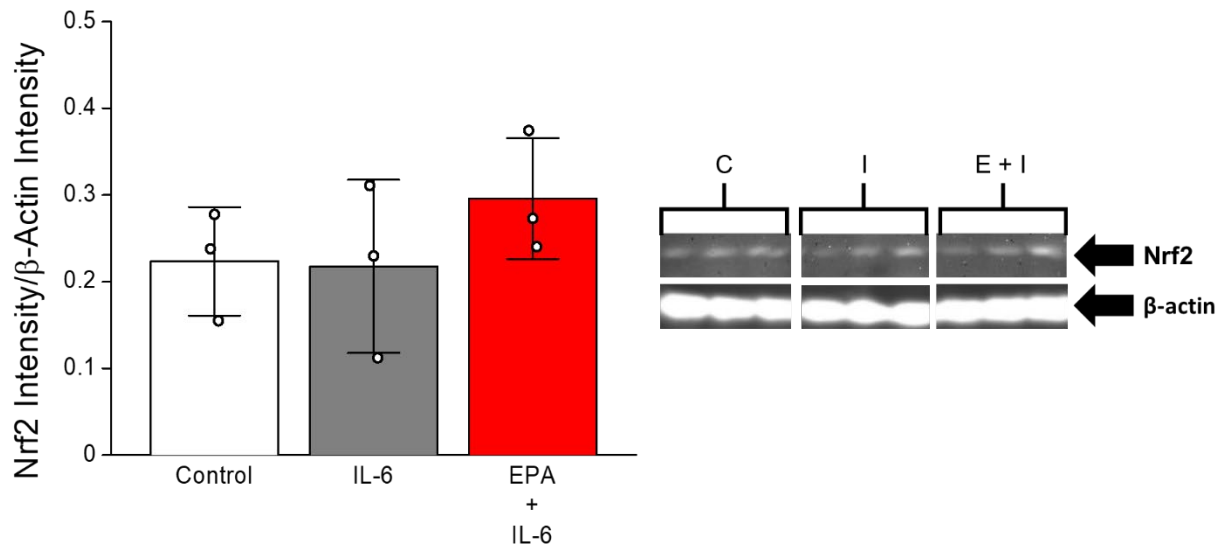
Summary of Anti-inflammatory and Antioxidant Response Proteins Modulated by EPA at 40 μ M in IL-6-Challenged ECs. Key: DDAH1, dimethylarginine dimethylaminohydrolase-1; HMGB1, high mobility group box protein 1; HMOX1, heme oxygenase-1; ITGAV, integrin α V; ITGB1, integrin B1; NQO1, NAD(P)H quinone oxidoreductase-1; PARK1, Parkinson disease protein 7; SNCA; α -synuclein; TXN, thioredoxin.

Figure S3



Expression of eNOS Across Treatment Groups. The expression of eNOS was normalized to β -actin levels. (Tukey-Kramer Multiple Comparisons Test; overall ANOVA: $p=0.2897$, $F = 1.534$). Values are mean \pm SD ($N = 3$). Abbreviations: C, control; I, IL-6; E + I, EPA + IL-6.

Figure S4



Expression of Nrf2 Across Treatment Groups. The expression of Nrf2 was normalized to β-actin levels. (Tukey-Kramer Multiple Comparisons Test; overall ANOVA: $p=0.4506$, $F = 0.9132$). Values are mean \pm SD ($N = 3$). Abbreviations: C, control; I, IL-6; E + I, EPA + IL-6.