

**Supplementary Table 3.** Hp genotypes are in Hardy-Weinberg Equilibrium in the CPIP cohort (n=395)

Genotype	N	Frequency (observed)	Frequency (expected)	$\chi^2$	$P_{HWE}^*$
<b>Hp1-Hp1</b>					
Hp1F-Hp1F	9	0.022785	0.027079		
Hp1F-Hp1S	33	0.083544	0.065406		
Hp1S-Hp1S	16	0.040506	0.039495		
<b>Hp1-Hp2</b>					
Hp1F-Hp2FS	70	0.177215	0.192886		
Hp1F-Hp2SS	9	0.022785	0.016664	5.63	0.533
Hp1S-Hp2FS	85	0.215190	0.232947		
Hp1S-Hp2SS	7	0.017722	0.020125		
<b>Hp2-Hp2</b>					
Hp2FS-Hp2FS	142	0.359494	0.343485		
Hp2FS-Hp2SS	24	0.060760	0.059350		
Hp2SS-Hp2SS	0	0	0.002564		

Hp, human haptoglobin; CPIP, Carotid Plaque Imaging Project; N, number of the observed genotype.

\*P-value for Hardy-Weinberg equilibrium ( $P_{HWE}$ ) from a chi-square test is reported.

**Supplementary Table 4.** Hp phenotype frequency in the CPIP cohort (n=395)

	Hp2-Hp2	Hp2-Hp1	Hp1-Hp1
Frequency, n (%)	166 (42.0)	171 (43.2)	58 (14.6)

Hp, human haptoglobin; CPIP, Carotid Plaque Imaging Project.

**Supplementary Table 5.** Frequency of Hp subtypes (n=90) in subjects with plaques assessed by immunohistochemistry

	Hp2FS	Hp2SS	Hp1S	Hp1F
Frequency, n (%)	48 (53.3)	4 (4.4)	27 (30.0)	11 (12.2)

Hp, human haptoglobin; n, number of Hp subtypes.

**Supplementary Table 6.** Hp phenotype frequency in subjects with plaques assessed by immunohistochemistry (n=45)

	Hp2-Hp2	Hp2-Hp1	Hp1-Hp1
Frequency, n (%)	15 (33.3)	22 (48.9)	8 (17.8)

Hp, human haptoglobin.

**Supplementary Table 7.** Immunohistochemical results for Hp1S carriers and non-Hp1S carriers

	Hp1S carrier	Non-Hp1S carrier	$P^*$
Glycophorin A area (%)	4.0 [0.9-7.2]	3.3 [1.6-6.9]	0.631
Collagen (Movat) area (%)	2.8 [1.5-6.7]	2.2 [0.9-4.4]	0.107
Oil Red O area (%)	4.1 [1.1-10.0]	11.1 [3.8-17.7]	0.077
Alpha-actin area (%)	5.0 [3.7-7.5]	3.6 [1.9-5.2]	0.033
CD68 area (%)	4.8 [4.5-7.8]	6.1 [0.9-11.1]	0.912

Continuous variables are presented as median [interquartile range].

CD, macrophages cluster of differentiation 68; Hp, human haptoglobin.

\*Comparison between Hp1S carriers and non-Hp1S carriers using non-parametric test (Mann-Whitney U test).