

Supplement Table 1: Plasma apolipoprotein C-III proteoforms identified by mass spectrometric immunoassay

ApoC-III proteoform		Theoretical m/z value	Observed m/z value
ApoC-III _{0a}	ApoC-III native	8764.652	8764.585
ApoC-III _{0b}	ApoC-III + (Gal) ₁ (GalNAc) ₁	9135.800	9135.494
des-A apoC-III ₁	ApoC-III + (Gal) ₁ (GalNAc) ₁ (NeuAc) ₁ des-Ala	9350.171	9349.854
ApoC-III ₁	ApoC-III + (Gal) ₁ (GalNAc) ₁ (NeuAc) ₁	9422.249	9421.966
des-A apoC-III ₂	ApoC-III + (Gal) ₁ (GalNAc) ₁ (NeuAc) ₂ des-Ala	9641.429	9641.895
ApoC-III ₂	ApoC-III + (Gal) ₁ (GalNAc) ₁ (NeuAc) ₂	9712.507	9712.862
ApoC-III var 4	ApoC-III + (Gal) ₂ (GalNAc) ₂ (Fuc) ₃	9933.768	9933.482
ApoC-III var 5	ApoC-III + (Gal) ₃ (GalNAc) ₃ (Fuc) ₂	10152.961	10152.745
ApoC-III var 6	ApoC-III + (Gal) ₄ (GalNAc) ₂ (Fuc) ₃	10258.056	10257.989
ApoC-III var 7	ApoC-III + (Gal) ₂ (GalNAc) ₄ (Fuc) ₃	10340.158	10341.426
ApoC-III var 8	ApoC-III + (Gal) ₃ (GalNAc) ₃ (Fuc) ₄	10445.869	10445.546
ApoC-III var 9	ApoC-III + (Gal) ₅ (GalNAc) ₃ (Fuc) ₄	10769.541	10769.108
Gal – Galactose; GalNAc – N-acetylgalactosamine; NeuAc –N-acetyl neuraminic acid (sialic acid); Fuc - Fucose ; des-A – lacking one alanine (A) residue from the N-terminus of the amino acid sequence			

Supplement Figure 1: Apolipoprotein C-III proteoforms identified with mass spectrometric immunoassay in a m/z range between 8300 and 11000. Shaded in grey are the most abundant apoC-III proteoforms, apoC-III_{0a}, apoC-III_{0b}, apoC-III₁ and apoC-III₂, which were analyzed in the study. Also present in the mass spectra are signals from the truncated (des-A) and fucosylated apoC-III proteoforms, as well as a signal from native apoC-II at m/z 8915, that were not utilized in the correlation analyses. Gal – galactose; GalNAc – N-acetylgalactosamine; NeuAc – sialic acid; Fuc – fucose

Supplemental Figure 2: Representative mass spectra of apoC-III proteoforms from (1) samples subjected to carb diet intervention: a) converters (pattern A) at baseline (upper panel); b) converters (pattern B) at follow up (lower panel); (2) subjected to weight loss intervention c) (Pattern B) at baseline (upper panel) and (pattern A) at follow up (lower panel). Note the opposite changes in the relative abundance of apoC-III_{0a}, apoC-III_{0b}, and apoC-III₁ to apoC-III₂ in both interventions.



