

Supplementary Table 1. Tissue distribution of VA and total BC.

Parameters	Experimental Groups			
	VAD	VA	BC	BC+VA
Plasma total BC ng/ml	0.032±0.007 ^a	0.029±0.010 ^a	0.126±0.019 ^b	0.100±0.02 ^{ab}
Percent plasma 9-cis BC of total BC	22.3±1.0	21.8±1.7	24.1 ± 1.0	25.9.0±1.0
Liver total BC ng/g	17.6±6.1 ^a	27.0±17.1 ^a	1,018.0 ± 120.0 ^b	1,162 .0±335.0 ^b
Percent liver 9-cis BC of total BC	21.6±8.3	ND	40.7±7.7	45.5±3.1
Liver VA ug/g	15.0 ±2.2 ^a	110.1±13.1 ^b	109.4±25.6 ^b	233±30.0 ^c
Adipose tissue total BC ng/g	75±19.5 ^a	106±25 ^a	384±113 ^b	51±10.3 ^a
Adipose tissue 9-cis BC of total BC	34.0±6.4	29.0±5.6	38.8±1.7	18.0±0.6*
Adipose tissue VA ng/g	62.0±9.2 ^a	89.2±14.2 ^a	161.1±28.1 ^{ab}	250.0±69.2 ^b
Brain total BC ng/g	9.6±4.5 ^a	10.2±3.0 ^a	20.0± 8.2 ^a	18.6 ±2.6 ^a
Percent brain 9-cis BC of total BC	ND	11.3±3.9	17.9±3.7	17.3±2.9
Brain VA ng/g	ND ^a	3.5±1.2 ^b	4.0±1 ^b	4.1±1 ^b
Renal total BC ng/g	38.0±14.9 ^{ab}	20.3±3.1 ^a	256.1±59 ^c	157.5±22 ^{bc}
Percent Renal 9-cis BC of total BC	11.7±4.2	22.7±5.8	37.7±2.2	29.6±2.4*
Renal VA ng/g	29.0±6.5 ^a	58.6±11.3 ^a	51.1±8.4 ^a	51.4±10.7 ^a

BC, percent BC of total BC and VA in plasma and tissues. Mean values within a row (a–c) not sharing a common superscript were significantly different by one way ANOVA and Tukey post hoc or Kruskal Wellis test comparison p<0.05). t-test was used to test the difference between 9-cis BC percent in BC group compared to BC+A group (p<0.05). * significantly different by t-test (BC vs BC + Vit A, p<0.05), * Total BC is the sum of 9-cis and all-trans BC. VAD = Vitamin A deficient , VA = vitamin A, BC= β-carotene, ND=not detected.