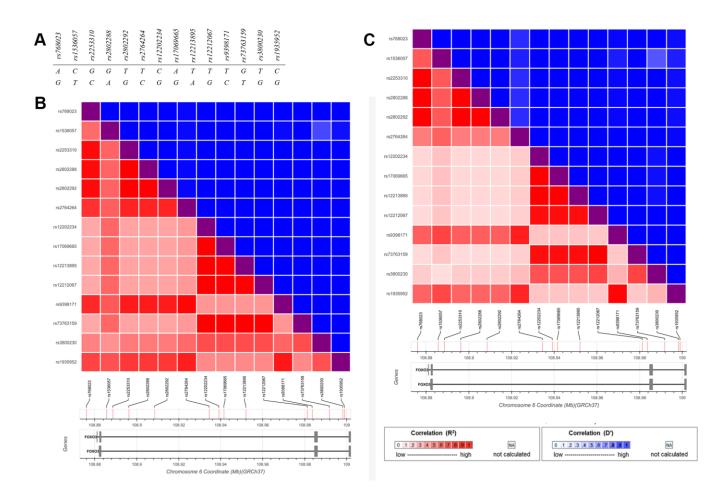
## **SUPPLEMENTARY FIGURES**



Supplementary Figure 1. Linkage disequilibrium and haplotypes of 14 *FOXO3* longevity-associated SNPs. (A) The 14 *FOXO3* longevity-associated SNPs (and alleles) that comprise the full haplotype. (B) Linkage disequilibrium in *FOXO3* and SNP locations – Japanese (JPN). (C) Linkage disequilibrium in *FOXO3* and SNP locations – Caucasian (CEU). LD matrix plot showing the 14 *FOXO3* SNPs using the program LDLink (https://ldlink.nci.nih.gov). In the Japanese population, shown in part (B) of Supplementary Figure 1, the data are from "JPN" population data from Phase 3 (Version 5) of the 1000 Genomes Project (https://www.internationalgenome.org). In the Caucasian population the values are from the "CEU" data. Note that the JPN data have a higher overall level of linkage disequilibrium (i.e., red intensities). Red squares denote blocks that have a Hedrick's multiallelic  $R^2 = 1$ , whereas blue squares denote blocks that have a  $R^2$  value < 1 [Hedrick PW. Gametic disequilibrium measures: Proceed with caution. *Genetics*. 1987; 117:331-342]. Blue blocks denote D' values.

Α	RS Number	Position (GR	Ch37)	Allele Freque	encies	1	Нар	lotyp	es					
	rs768023	chr6:108876	002	A=0.755, G=0	).245		Α	G		G	G	G	G	
	rs1536057	chr6:108885	623	C=0.841, T=0	.159		С	Т	20	Т	С	С	С	
	rs2253310 chr6:108888593			G=0.764, C=0.236			G	С		С	С	С	С	
	rs2802288	chr6:108896	215	G=0.764, A=0	0.236		G	А		A	Α	Α	Α	ı
	rs2802292	chr6:108908	chr6:108908518		T=0.764, G=0.236		Т	G		G	G	G	G	١
	rs2764264	chr6:108934461		T=0.784, C=0.216			Т	С		С	С	Т	С	ı
	rs12202234	chr6:108939083		C=0.899, G=0.101			С	G		С	С	С	С	ı
	rs17069665	chr6:108941468		A=0.899, G=0.101			Α	G		A	Α	Α	Α	ı
	rs12213895	chr6:108951	968	T=0.899, A=0	.101		Т	А		Т	Т	Т	Т	١
	rs12212067	chr6:108981196		T=0.899, G=0.101			Т	G		т	Т	т	Т	ı
	rs9398171	chr6:108983527		T=0.788, C=0			Т			С	С	Т	С	١
	rs73763159 chr6:108991686 rs3800230 chr6:108998128 rs1935952 chr6:108998905			G=0.899, T=0.101			G	Т		G	G	G	G	ı
				T=0.861, G=0.139			Т	G		Т	G	Т	Т	ı
				C=0.808, G=0.192			С	G		G	G	С	С	١
				Haplotype Count			156		21	9	7	4	3	١
				Haplotype Fi									0.0144	
				паріотурет	equen	cy (	0.75	0.10	0.0	455 0	.0337	0.0192	0.0144	
В	RS Number P	osition (GRCh37)	Allele	Frequencies	Haploty	/pes								
_	rs768023	chr6:108876002	A=0.64	46, G=0.353	А	G		G	G	Α	G	G		
	rs1536057	chr6:108885623	C=0.73	37, T=0.263	С	Т		Т	С	С	С	Т		
	rs2253310	chr6:108888593	G=0.6	46, C=0.353	G	С		С	С	G	С	С		
	rs2802288	chr6:108896215	G=0.6	46, A=0.353	G	Α		Α	Α	G	Α	Α		
	rs2802292	chr6:108908518	T=0.64	46, G=0.353	Т	G		G	G	Т	G	G		
	rs2764264	chr6:108934461	T=0.70	02, C=0.298	Т	С		С	Т	С	С	Т		
	rs12202234	chr6:108939083	C=0.9	19, G=0.081	С	С		G	С	С	С	С		
	rs17069665	chr6:108941468	A=0.9	19, G=0.081	Α	Α		G	Α	Α	Α	Α		
	rs12213895	chr6:108951968	T=0.91	19, A=0.081	т	Т	Т	Α	Т	т	т	Т		
	rs12212067	chr6:108981196	T=0.92	24, G=0.076	т	т		G	т	т	т	т		
	rs9398171	chr6:108983527		32, C=0.268	Т	С		С	Т	т	С	т		
		chr6:108991686		24, T=0.076	G	G		Т	G	G	G	G		
		chr6:108998128		99, G=0.101	Т	Т		G	Т	Т	G	Т		
		chr6:108998905		27, G=0.273	С	G		G	С	С	G	С		
			Haplo	type Count	120	3	31	15	13	6	5	5		
				type Frequency										

Supplementary Figure 2. FOXO3 longevity haplotypes. (A) Japanese Haplotype – allele frequency of haplotype = 0.10. (B) Caucasian haplotype – allele frequency of haplotype = 0.76. Tables of observed haplotypes were generated using LDHap (https://ldlink.nci.nih.gov/?tab=ldhap). Haplotypes with frequencies greater than 1% are displayed vertically and ordered by observed frequency in the selected query sub-population. Variant bi-allelic genotypes and frequencies are reported in rows and are sorted by genomic position. Links are available to dbSNP (https://www.ncbi.nlm.nih.gov/snp/) RS numbers and coordinates in the UCSC Genome Browser (http://genome.ucsc.edu/cgi-bin/hgGateway; version GRCh37 is shown). Reference populations were "JPN" Japanese, shown in "A", and "CEU" Caucasian, shown in "B", using data from Phase 3 (Version 5) of the 1000 Genomes Project (https://www.internationalgenome.org). Rectangles highlight the longevity haplotype (minor alleles noted in Supplementary Figure 1) that has a frequency of 0.101 in the Japanese population and 0.758 in Caucasians.