Supplemental Table I. ROS and Atherosclerosis

Gene/Protein	Experimental Mouse Background	Diet/Intervention	Effect
Catalase	1. Cat overexpression, ApoE$^{-/-}$[267] 2. Cat + SOD1 overexpression, ApoE$^{-/-}$[267]	Standard chow (5-6 months)	↓ Aortic lesion area (total)
	1. mitoCat BM→ Ldlr-/-[259] 2. mCAT$^{flox/}$ LysMCre$^{+/-}$, Ldlr$^{-/-}$[259]	WTD (8 weeks)	↓ Aortic sinus lesion ↓ Inflammatory signaling ↓ Monocyte infiltration
	MitoCat BM→ Ldlr-/- (36 weeks old)[260]	WTD (14 weeks)	↓ Aortic sinus lesion ↓ Neutrophil extracellular traps
G6PD	G6PD$^{-/-}$, ApoE$^{-/-}$[256]	WTD (11 weeks)	↓ O_2^- production
GPX	GPX1$^{-/-}$, ApoE$^{-/-}$[271]	WTD (12 and 24 weeks)	– 12 weeks aortic lesion area ↑ 24 weeks aortic lesion area ↑ Macrophage proliferation
	GPX1$^{-/-}$, ApoE$^{-/-}$[272]	STZ (14 and 20 weeks)	↑ Aortic lesion area ↑ Inflammatory markers
NOX1	NOX1$^{-/y}$, ApoE$^{-/-}$[228,229]	HFD (18 weeks)	↓ Aortic lesion area (sinus and thoracic) ↓ Macrophage infiltration
	NOX1$^{-/y}$, ApoE$^{-/-}$[233]	WTD (7, 14 and 21 weeks)	– Total aortic lesion ↑ Aortic sinus lesion ↓ Collagen ↑ MMP
	NOX4-/-, ApoE-/-[229,246]	STZ (10 weeks)	↓ Aortic sinus lesion ↓ T-cell recruitment ↓ Inflammatory markers
NOX2	NOX2$^{-/y}$, ApoE$^{-/-}$[226]	WTD (7 and 14 weeks)	↓ Cholesterol ↓ Lesion area (sinus and whole aorta)
	EC NOX2 overexpression, ApoE$^{-/-}$[235]		– Aortic sinus lesion ↑ Inflammatory markers ↑ Macrophage infiltration
	NOX1$^{-/y}$, ApoE$^{-/-}$[230,246]	STZ Injection (10 and 20 weeks)	↓ Aortic sinus lesion ↓ Macrophage infiltration ↓ Collagen I
	NOX2$^{-/y}$, ApoE$^{-/-}$[223]	Atherogenic diet (20 weeks)	↓ Triglycerides ↓ Cholesterol – Aortic sinus lesion
NOX4	NOX4$^{-/-}$, ApoE$^{-/-}$[230]	STZ (20 weeks)	↑ Aortic lesion area (total) ↑ Macrophage infiltration ↑ Collagen I & III
	NOX4$^{-/-}$, Ldlr$^{-/-}$[244]	HFD (20 weeks)	↑ Aortic sinus lesion ↑ Collagen EC dysfunction
	Nox4$^{flox/flox}$-Cre-ERT2$^{+/0}$, ApoE$^{-/-}$[245]	Standard chow (9 months)	↑ Aortic lesion area (total) ↑ Collagen ↑ Monocyte infiltration
	EC Nox4^{DN}, ApoE$^{-/-}$[247]	STZ (10 weeks) WTD (14 weeks)	↑ Aortic sinus lesion
	SMC Nox4^{DN}, ApoE$^{-/-}$[251]	WTD (14 weeks)	↓ Aortic sinus lesion

NRF2	NRF2$^{-/-}$, ApoE$^{-/-}$[270]	Standard chow (14 weeks)	↓ Aortic sinus lesion ↓ Cholesterol efflux ↓Lipid uptake
p47^{phox}	p47$^{phox-/-}$, ApoE$^{-/-}$[224]	Standard Chow	– Aortic sinus lesion
	p47$^{phox-/-}$, ApoE$^{-/-}$[225,236]	Standard chow (30 weeks) HFD (10 weeks) WTD (NSL)	↓ Whole aorta lesion (all diet types)
	1. p47$^{phox-/-}$ BM→ p47phox$^{+/+}$, ApoE$^{-/-}$ (BM knockout)[236] 2. p47$^{phox+/+}$ BM→ p47$^{phox-/-}$, ApoE$^{-/-}$ (Vascular knockout)[236]	WTD (12 weeks)	↓ Total aorta lesion ↓ Macrophage infiltration ↓ Inflammatory markers
PRDX	1. PRDX1$^{-/-}$[274] 2. PRDX1$^{-/-}$, ApoE$^{-/-}$[274]	Standard chow (4 months)	↑ Leukocyte rolling ↑ Aortic sinus lesion ↑ Macrophage infiltration
	PRDX4 overexpression, ApoE$^{-/-}$[268]	HCD (12 weeks)	↓ Aortic lesion area (total) ↑ Smooth muscle and collagen ↓ T-cell
	PRDX2$^{-/-}$, ApoE$^{-/-}$[275]	Atherogenic cholate diet (10 weeks)	↑ Aortic lesion area (total) ↑ Inflammatory signaling
SOD	SOD2$^{-/+}$, ApoE$^{-/-}$[273]	Standard chow (17 and 34 weeks)	↑ Aortic lesion area (total)
TRX	EC TRX overexpression, ApoE$^{-/-}$[269]	Atherogenic diet (8 weeks)	↓ Aortic lesion area (total)
UCP2	1. UCP2$^{-/-}$[263] 2. UCP2$^{-/-}$ BM→ Ldlr$^{-/-}$[264]	1. Atherogenic diet (14 weeks)[263] 2. Atherogenic diet (7 weeks)[264]	↑ Aortic sinus lesion ↑ Macrophage infiltration

Contribution of ROS regulating enzymes in the development of atherosclerosis. WTD=western-type diet, STZ= streptozotocin, HFD=high-fat diet, HCD=high-cholesterol diet.

Supplemental Table II. ROS and Diabetes

Gene/Protein	Mouse Genotype	Diet/Intervention	Effect
		Vascular Tone	
$p66^{shc}$	1. $p66^{shc-/-}$[291] 2. $p66^{shc(K81R)}$ (dominant negative)[293]	STZ	↑ EC-dependent relaxation ↑ eNOS activity
NOX2	$NOX2^{-/-}$ (7 month old)[296]	HFD (11 weeks)	↑ Glucose tolerance ↓ Obesity ↑ EC-dependent relaxation
	db/db	$p22^{phox}$ siRNA iv injection[298]	↑ EC-dependent relaxation
	$NOX2^{-/-}$, ESMIRO[299]		↑ Vasomotor function
	1. $NOX2^{-/-}$[304] 2. $NOX2^{-/-}$ BM –MNCs → $NOX2^{+/+}$[304]	STZ (8 weeks) followed by femoral artery ligation	↑ Post-ischemic neovascularization
NOX1	$NOX1^{-/y}$, db/db[297]		↑ EC-dependent relaxation ↑ EC-independent relaxation ↑ myogenic tone

Contribution of ROS regulating enzymes in diabetic vascular dysfunction.