

SUPPLEMENTAL MATERIAL

Table S1. Autograft patency.

Animal ID	Sex	Haplotype	Matching	Days Post-Surgery	Explant Patency
Cy0665	M	M1/M3	Surgical Control	448	Yes
Cy0674	F	M1/M3	Surgical Control	490	No
Cy0683	M	M1/M6	Surgical Control	364	Yes
Cy0672	F	M3/M3	Surgical Control	500	No
Cy0676	M	M3/M3	Surgical Control	448	Yes
Cy0661	F	M3/M3	Surgical Control	364	No
Cy0682	M	M1/M1	Surgical Control	364	No
Cy0673	F	M1/M3	Surgical Control	521	Yes
Cy0700	F	M5/M6	Surgical Control	521	No
Cy0694	F	M3/M3	Surgical Control	350	Yes
Cy0695	F	M4/M4	Surgical Control	350	Yes

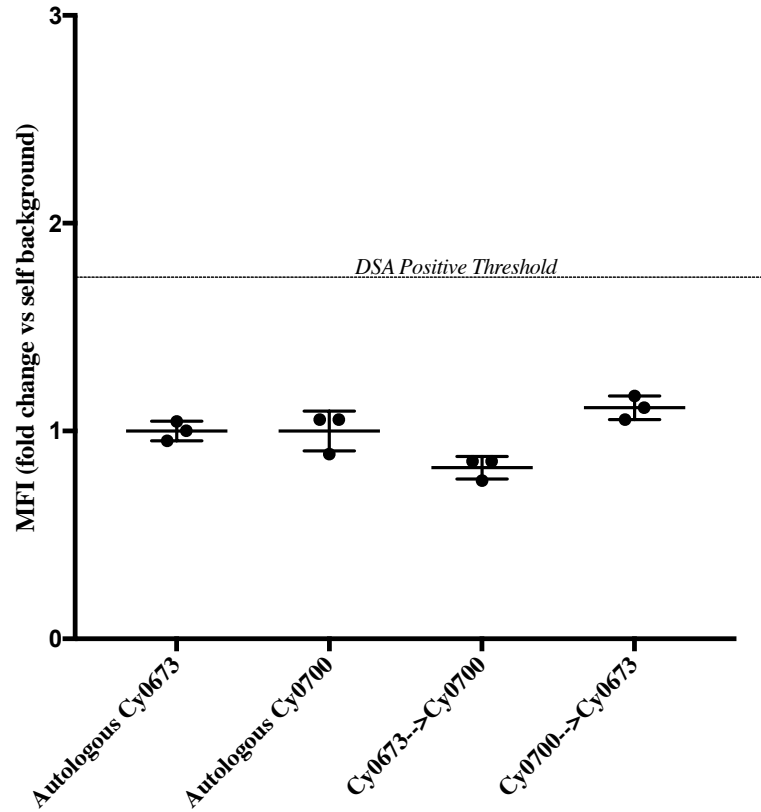
Table S2. Donor specific antibody (DSA).

Animal ID	Sex	Haplotype	Radial Artery Swap Direction	DSA		
				<i>Pre-existing</i>	<i>De Novo</i>	<i>Target Donor</i>
Cy0665	M	M1/M3	M1/M3→M3/M3	No	No	--
Cy0676	M	M3/M3	M3/M3→M1/M3	No	No	--
Cy0682	M	M1/M1	M1/M1→M1/M6	No	No	--
Cy0683	M	M1/M6	M1/M6→M1/M1	No	No	--
Cy0680	M	M1/M1	M1/M1→M1/M2	No	No	--
Cy0681	M	M1/M2	M1/M2→M1/M1	No	No	--
Cy0660	M	M3/M3	M3/M3→M1/M3	No	No	--
Cy0666	M	M1/M3	M1/M3→M3/M3	No	No	--
Cy0672	F	M3/M3	M3/M3→M3/M6	No	No	--
Cy0675	F	M3/M6	M3/M6→M3/M3	No	No	--
Cy0661	F	M3/M3	M3/M3→M1/M3	No	No	--
Cy0674	F	M1/M3	M1/M3→M3/M3	No	No	--
Cy0673	F	M1/M3	M1/M3→M5/M6	No	No	--
Cy0700	F	M5/M6	M5/M6→M1/M3	No	Yes	Cy0673
Cy0694	F	M3/M3	M3/M3→M4/M4	No	No	--
Cy0695	F	M4/M4	M4/M4→M3/M3	No	No	--
Cy0692	F	M2/M4	M2/M4→NMC	No	No	--
Cy0613	F	NMC	NMC→M2/M4	No	No	--

A summary of transplant donor:recipient pair DSA detection is shown. Radial artery swap direction indicates recipient serum bound to donor PBMC (Recipient Serum→Donor PBMC). Animals grouped by transplant pairs. NMC, non-Mauritian cyno

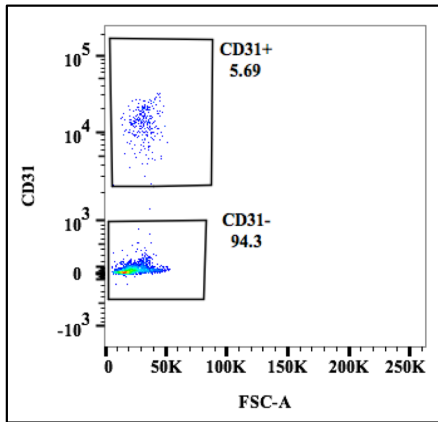
Figure S1. Pre-transplant donor-specific antibodies.

Pre-Transplant Donor-Specific Antibody (DSA)



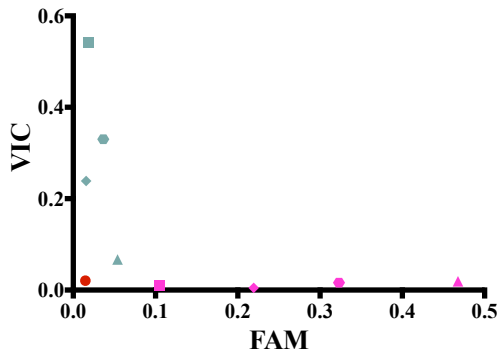
Representative graph summarizing the pre-transplant results of one experiment showing DSA positive pair Cy0700 and Cy0673.

Figure S2. Assessment of cell identity within allografts. A.



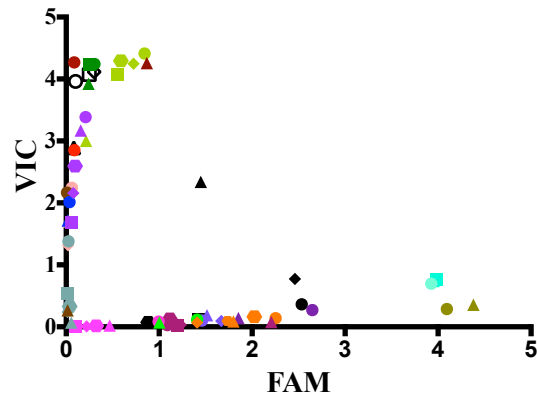
Cy0682/Cy0683

C.

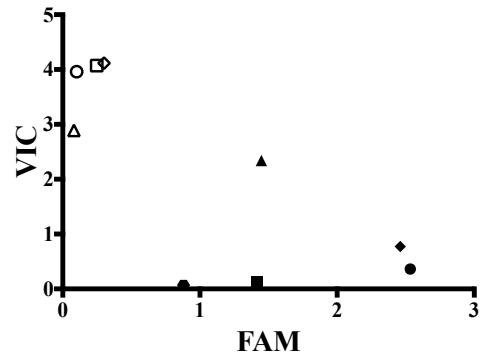


▲ Cy0682 CD31+ Left ▲ Cy0683 CD31+ Left
 ◆ Cy0682 CD31- Left ◆ Cy0683 CD31- Left
 ■ Cy0682 CD31+ Right ■ Cy0683 CD31+ Right
 ● Cy0682 CD31- Right ● Cy0683 CD31- Right
 ● H2O Ctl

B.



Cy0694/Cy0695



○ Cy0694 Ctl ● Cy0695 Ctl
 ▲ Cy0694 CD31+ Left ▲ Cy0695 CD31+ Left
 ◆ Cy0694 CD31- Left ◆ Cy0695 CD31- Left
 □ Cy0694 CD31+ Right ■ Cy0695 CD31+ Right
 ● Cy0695 CD31- Right

At end of study, radial artery grafts were explanted. The proximal and distal anastomosis sites were saved for sectioning and staining while the middle of the graft was processed and analyzed for the presence of host/donor cells. (A) The graft was digested and individual graft cells were sorted for CD31+ and CD31- populations. Shown is a representative sort for CD31 cells. (B) Plot of SNP analysis results from all samples in the study. (C) Plot of SNP analysis results from a partial haplomatch (left panel) and complete mismatch animal (right panel) that showed a mixture host and donor endothelial cells within the graft.