Table S1: Antibodies used for immunofluorescence of normal tissue

Antigen	Manufacturer	Clone[a]	Iso	Dil	Amplification/ detection[b]
CD11c	BD Pharmingen	B-ly6	IgG1	1:100	Goat anti-mouse IgG1-A488
CD11c- A488	BD Pharmingen	B-ly6	IgG1	1:10	Nil additional[c]
Factor XIIIA	Enzyme Research	AP Polyclonal Sheep	Nil	1:100	Donkey anti-sheep-A568
HLA-DR-FITC	BD	L243	IgG2a	1:100	Goat anti-FITC-A488
DEC-205/CD205	RM Steinman	MG38	IgG2b	1:100	Goat anti-mouse IgG2b-A568
CD1a-FITC	Pharmingen	HI149	IgG1	1:100	Goat anti-FITC-A488
Langerin/CD207	Immunotech	DCGM4	IgG1	1:100	Goat anti-mouse IgG1-A568
DC-SIGN/CD209-FITC	BD Pharmingen	DCN46	IgG2b	1:50	Goat anti-FITC-A488
DC-LAMP/ CD208-PE	Immunotech	104.G4	IgG1	1:50	Goat anti-mouse IgG1-A568
CD14-A488	BD Pharmingen	M5E2	IgG2a	1:100	Goat anti-mouse IgG2a-A488
BDCA-1	Miltenyi	AD5-8E7	IgG2a	1:100	Goat anti-mouse IgG2a-A568
BDCA-2	Miltenyi	AC144	IgG1	1:100	Goat anti-mouse IgG1-A568
CD123	BD	9F5	IgG1	1:100	Goat anti-mouse IgG1-A488
MMR/CD206	GeneTex	15-2	IgG1	1:100	Goat anti-mouse IgG1-A568
CD68	BD Pharmingen	Y1/82A	IgG2b	1:100	Goat anti-mouse IgG2b-A488
CD11b	BD Pharmingen	ICRF44	IgG1	1:10	Goat anti-mouse IgG1-A568
CD45-FITC	BD Pharmingen	HI30	IgG1	1:100	Goat anti-FITC-A488
CD163-FITC	Acris	5C6-FAT	IgG1	1:100	Goat anti-FITC-A488
CD63-FITC	BD Pharmingen	H5C6	IgG1	1:100	Goat anti-FITC-A488
RFD7	Abcam	RFD7	IgG1	1:100	Goat anti-mouse IgG1-A568

[a]All are murine monoclonals unless stated

[b]All amplification/ detection antibodies are from Invitrogen /Molecular Probes unless stated

[c]CD11c conjugated to A488 gives high non-specific epidermal staining. This was used where there were two IgG1 antibodies.

Table S2: Antibodies used for flow cytometry of normal tissue leukocytes

Antigen-fluorophor	Manufacturer	Clone[a]	Iso	Dil
BDCA-1 (CD1c)-FITC or PE	Miltenyi	AD5-8E7	IgG2a	1:50
CD11c-PE-Cy7	Biolegend	3.9	IgG1	1:33
CD163-A647	Acris	5C6-FAT	IgG1	1:33
Factor XIIIA-A647	Enzyme Research	AP Polyclonal Sheep	Nil	1:33
HLA-DR-APC-Cy7	BD Pharmingen	L243	IgG2a	1:50
CD14-PerCP Cy5.5	BD Pharmingen	M5E2	IgG2a	1:25
Lin-PE: CD3, CD19, CD20, CD56	Lab custom	various	IgG1 & IgG2b	1:20
CD1a-FITC	Pharmingen	HI149	IgG1	1:20
CD40-FITC	BD Pharmingen	5C3	IgG1	1:20
CD80-FITC	BD Pharmingen	L307.4	IgG1	1:20
CD86-FITC	BD Pharmingen	2331 (FUN-1)	IgG1	1:20
DEC205/CD205-PE	Biolegend	MG38	IgG2b	1:20
MMR/CD206-FITC	BD Pharmingen	19.2	IgG1	1:20
Langerin/CD207-PE	Immunotech	DCGM4	IgG1	1:20
DC-LAMP/CD208-PE	Immunotech	104.G4	IgG1	1:20
DC-SIGN/CD209-FITC	BD Pharmingen	DCN46	IgG2b	1:20
BDCA-2-FITC	Miltenyi	AC144	IgG1	1:50
CD45-FITC	BD Pharmingen	H130	IgG1	1:20

[a]All are murine monoclonals unless stated

Table S3. Results of alloMLR with normal dermal DC populations.

DAY	DC:T cells	T cells alone [a]	BDCA-1$^+$	CD163$^+$ [d]
6	1:10	0.5%	8.6%	2.3%
6	1:10	0.5%	10.1%	3.6%
8	1:10	1.4%	9.3%	2.4%
6 [b]	1:50	1.2% [c]	64.3%	3.8% [e]
6 [b]	1:100	1.0%	25.3%	2.2% [e]

[a] Percent of live cells proliferating without the addition of DCs

[b] Sorted DCs pre-cultured for 2 days prior to setting up MLR; DCs cultured without cytokines induce a similar increase in proliferation

[c] Addition of the DC maturing cytokines to T cells alone does not increase proliferation

[d] First two MLRs were using Miltenyi beads to select BDCA-1$^+$ cells compared with the BDCA-1$^-$ fraction in the alloMLR; this population contains predominantly CD163+ cells (unpublished data).

[e] Ratio CD163+ cells :T cells was 1:500, and 1:250 for these two experiments respectively, due to low yields post-sorting and culturing

Figure S1

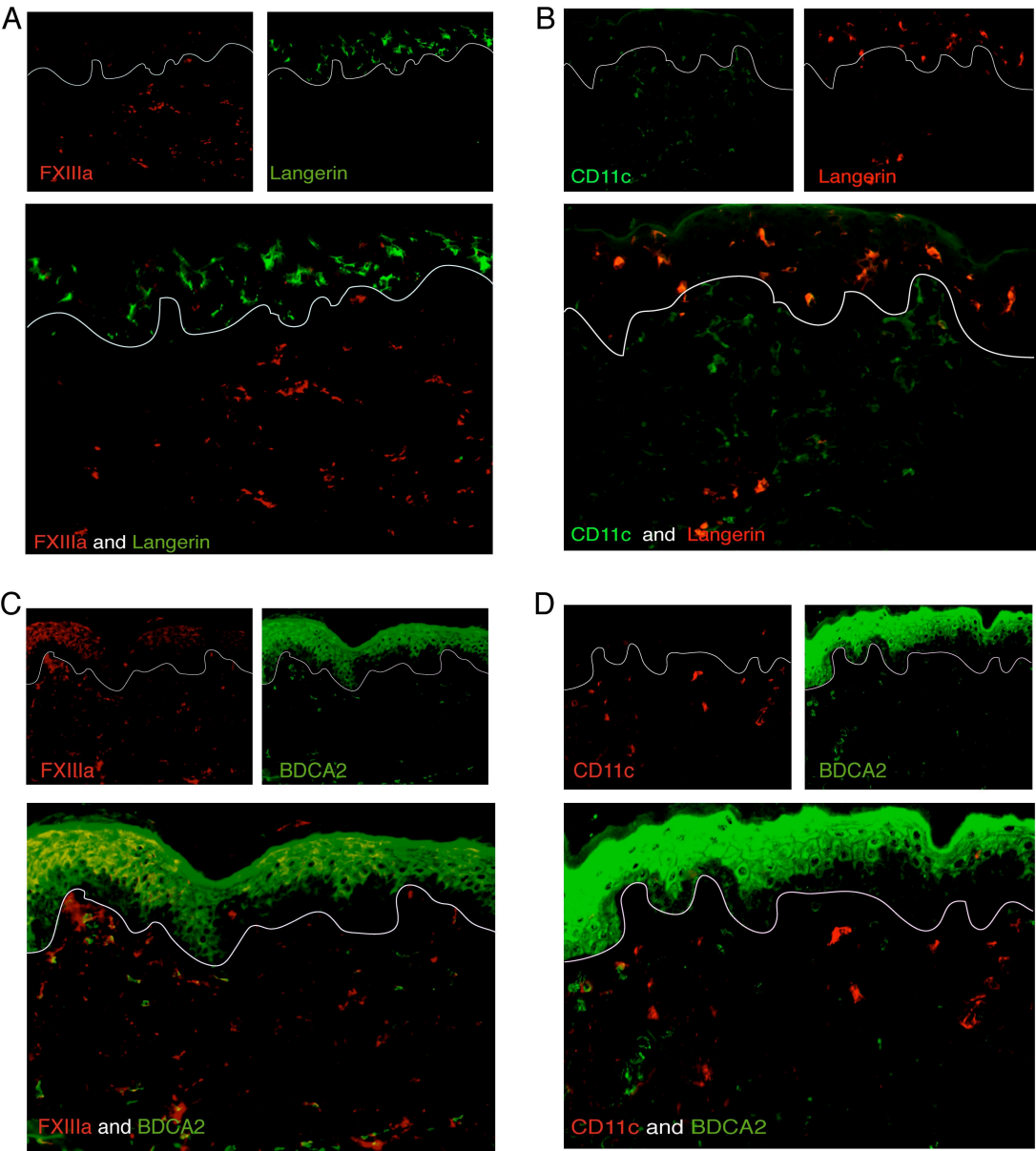

A
FXIIIa
Langerin
FXIIIa and Langerin
B
CD11c
Langerin
CD11c and Langerin
C
FXIIIa
BDCA2
FXIIIa and BDCA2
D
CD11c
BDCA2
CD11c and BDCA2

Figure S2a

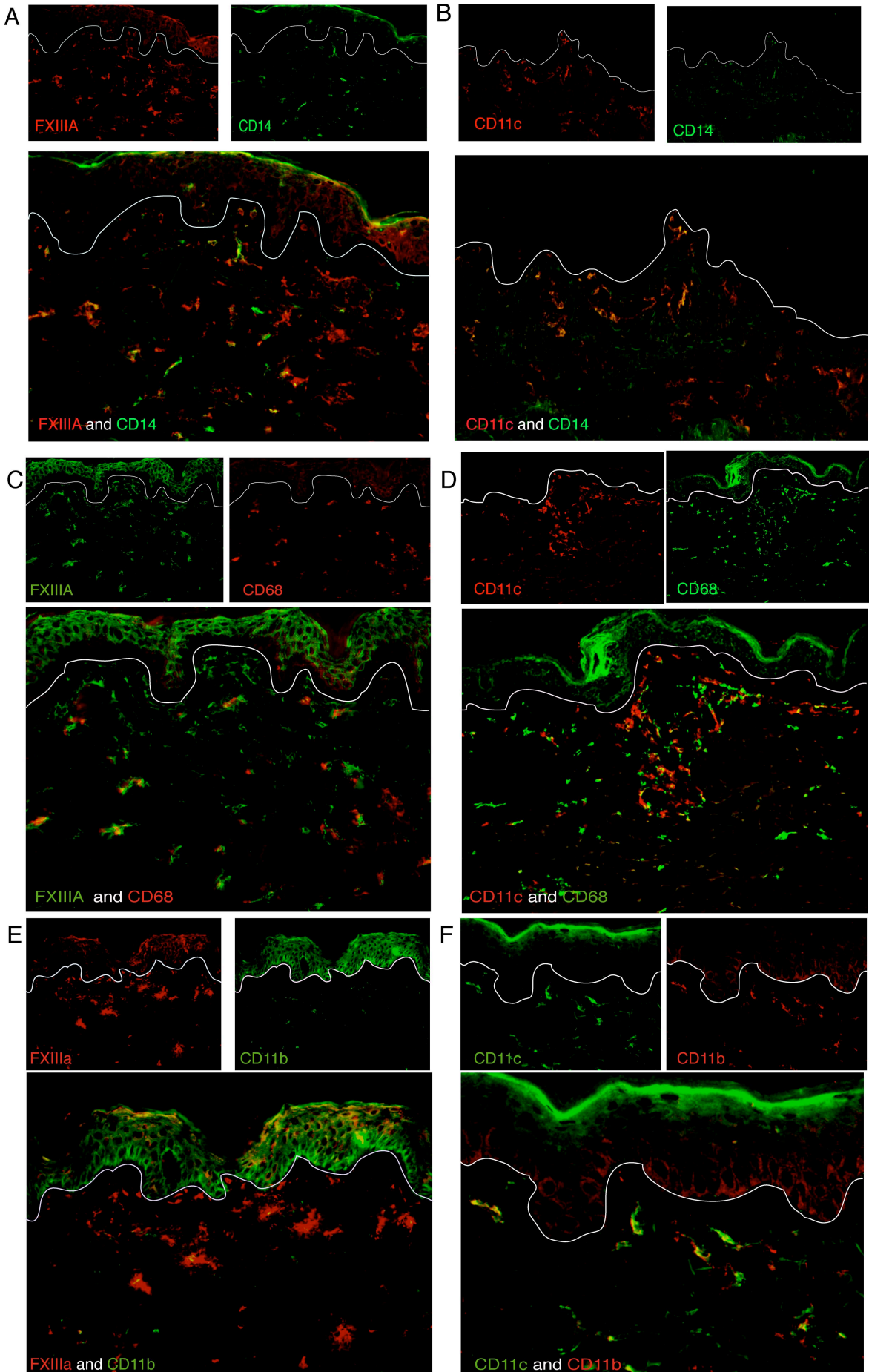
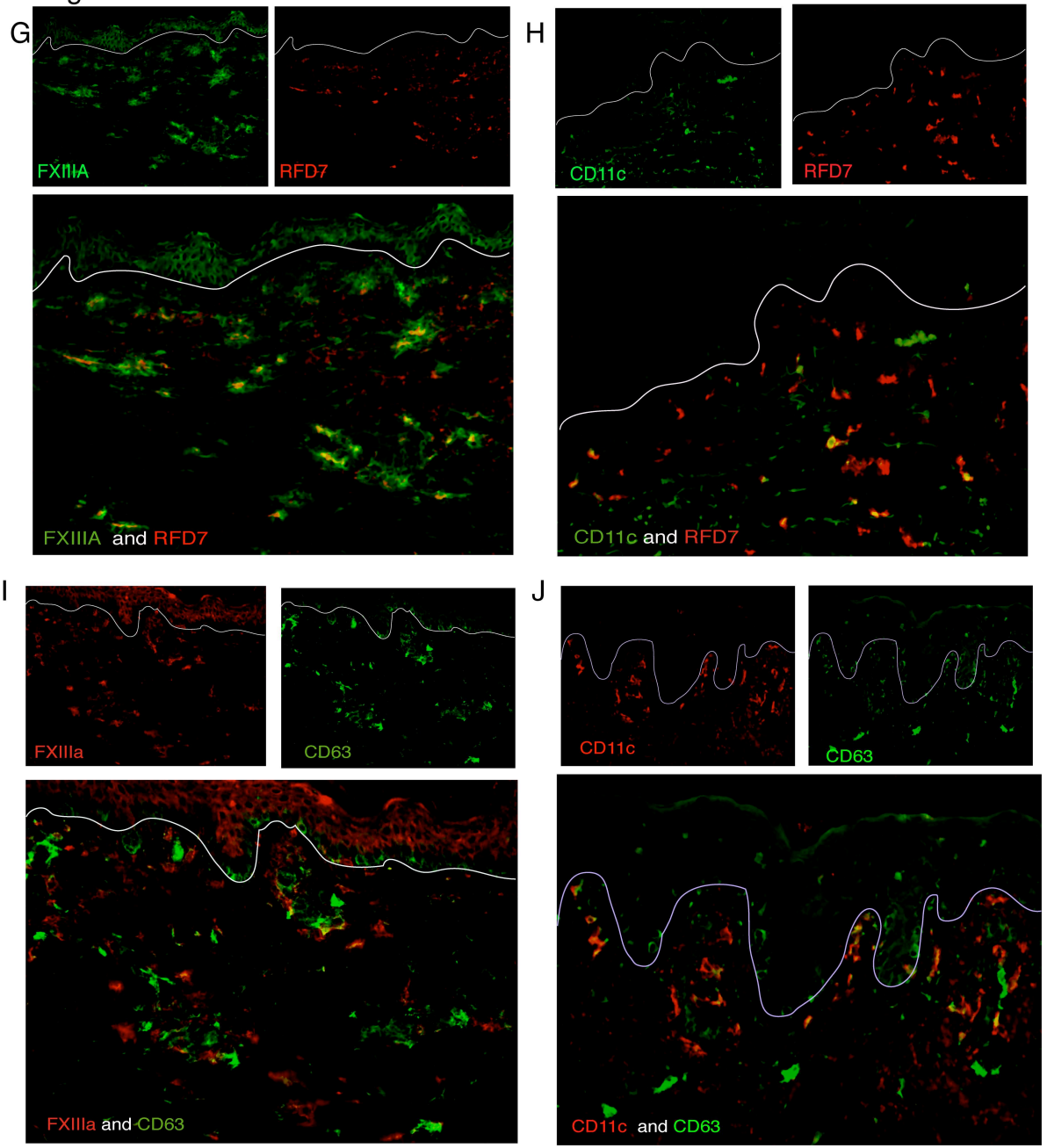

A
FXIIIA
CD14
FXIIIA and CD14
B
CD11c
CD14
CD11c and CD14
C
FXIIIA
CD68
FXIIIA and CD68
D
CD11c
CD68
CD11c and CD68
E
FXIIIa
CD11b
FXIIIa and CD11b
F
CD11c
CD11b
CD11c and CD11b

Figure S2b


G
FXIIIA
RFD7
FXIIIA and RFD7
H
CD11c
RFD7
CD11c and RFD7
I
FXIIIa
CD63
FXIIIa and CD63
J
CD11c
CD63
CD11c and CD63

Supplementary Figure 1. Alternate markers for Langerhans cells (langerin) and plasmacytoid DCs (BDCA-2) do not overlap with FXIIIA or CD11c. (A) FXIIIA did not overlap with Langerhans cell marker langerin, or **(C)** plasmacytoid cell marker BDCA-2. Neither did CD11c **(B and D)** respectively.

Supplementary Figure 2A and 2B. Other potential macrophage markers stained both FXIIIA$^+$ and CD11c$^+$ cells. FXIIIA$^+$ and CD11c$^+$ cells showed variable co-expression with CD14 **(A, B)**, CD68 **(C, D)**, CD11b **(E, F)**, RFD7 **(G, H)**, and CD63 **(I, J)**.