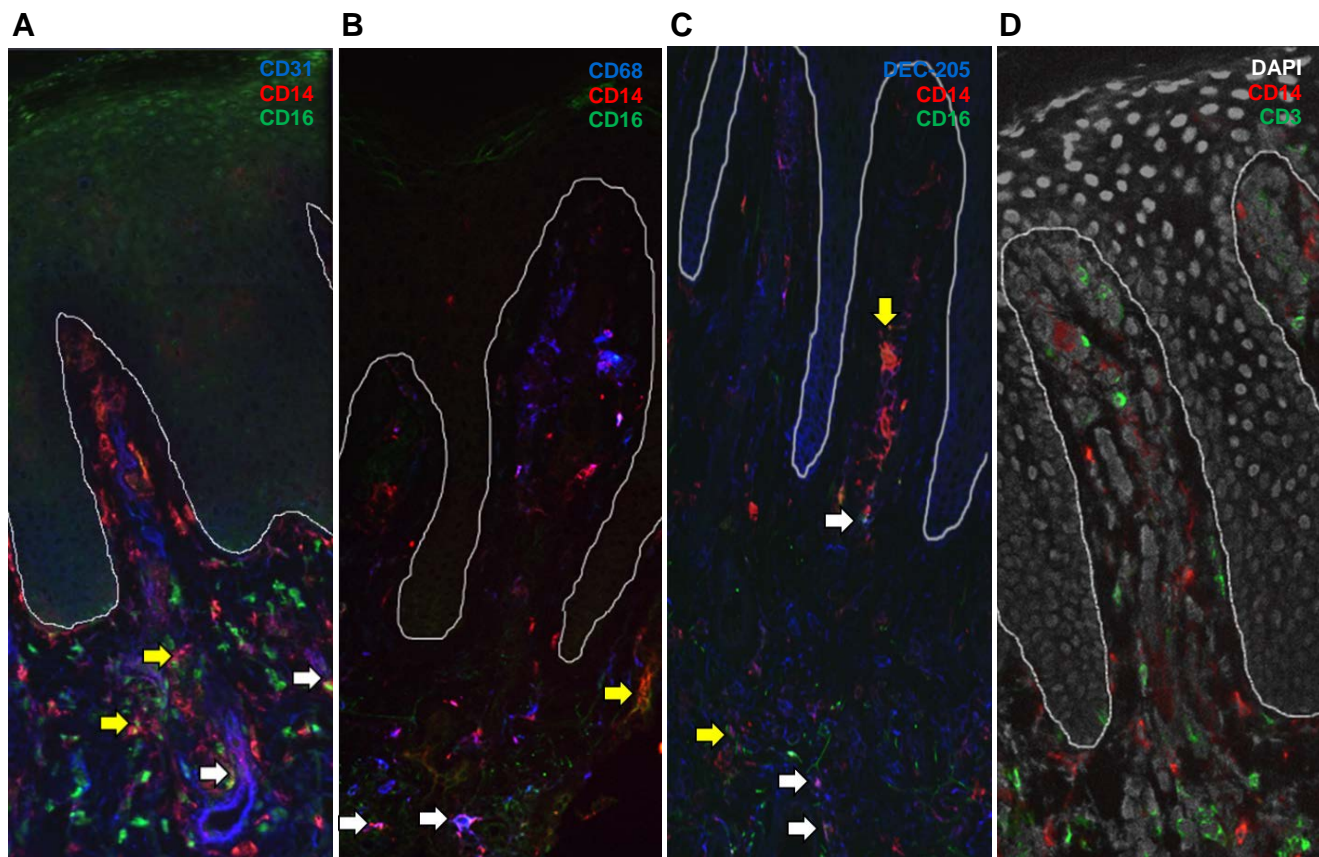
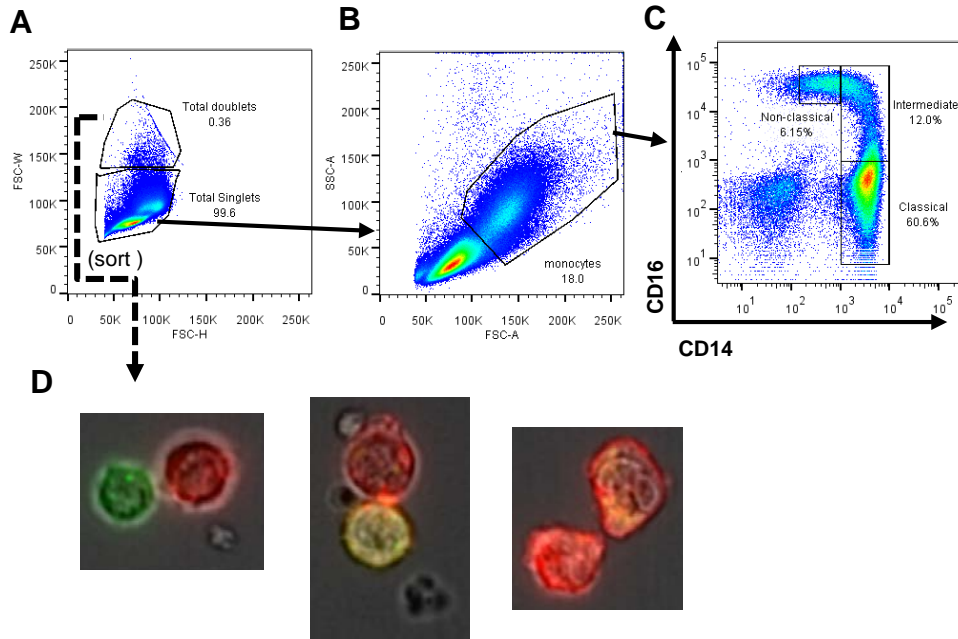


Supplemental Figure 1: CD14⁺ CD16⁺ co-localization with additional cell markers



Supplemental Figure 1: CD14, CD16, and CD3 staining with CD31, CD68, or DEC-205 co-localization. (A) Frozen involved human psoriatic plaque stained for CD14 (red), CD16 (green), and CD31 (blue) to identify vasculature (n=3). (B) Frozen involved human psoriatic plaque stained for CD14 (red), CD16 (green), and the macrophage marker, CD68 (blue) (n=2). (C) Frozen involved human psoriatic plaque stained for CD14 (red), CD16 (green), and the DC marker, DEC-205 (blue) (n=2). (D) CD14⁺⁺ cells do not co-localize with CD3⁺ cells in involved psoriasis tissue. Frozen involved human psoriatic plaque stained for CD14 (red) and CD3 (green) with nuclei stained by DAPI (white) (n=3). In all sections, yellow arrows indicate double positive CD14/CD16 staining while white arrows indicate triple positive cells.

Supplemental Figure 2: Gating Strategy



Supplemental Figure 2: Monocyte and doublet gating strategy. (A) All PBMC events are gated on FSC-W vs. FSC-H to separate singlets from doublets. (B) Monocytes are electronically selected based on their SSC-A vs. FSC-A profile. (C) The left side of the classical population gate is determined based on CD14 isotype and the upper limit is determined by CD16 isotype. The intermediate population gate is also determined by CD14 isotype combined with all events above the CD16 isotype. The non-classical population is determined by the CD14 isotype for the right side of the gate and negative events for the left side of the gate. (D) Representative images obtained on the Amnis Imagestream cytometer of cells in the doublet gate post-sort demonstrating the doublet population used in subsequent transcriptomic analyses. Dotted line in panel A indicates doublet gate used in sort.

Supplemental Table I: Demographics

	Number	Age (mean \pm STD)	Gender	Mean PASI	Mean Duration of Disease (years)
Original Cohort					
Control	23	29.8 \pm 7.6	10 male (43.5%) 13 female (56.5%)	N/A	N/A
Psoriasis	19	43.4 \pm 12.3	11 male (57.9%) 8 female (42.1%)	11.7 \pm 12.9	19.8 \pm 11.2
PCR Array Cohort					
Control	5	39.6 \pm 9.5	3 Male (60%) 2 Female (40%)	N/A	N/A
Psoriasis	5	42.2 \pm 11.4	3 Male (60%) 2 Female (40%)	6.3 \pm 5.9	10.0 \pm 7.2
HMVEC-D co-culture Cohort					
Control	4	32.8 \pm 9.3	1 male (25%) 3 female (75%)	N/A	N/A

*Note: One of the psoriasis patients from the PCR cohort (first on the heatmap) was on Soriatine at the time of the blood draw for a non-psoriasis condition

Supplemental Table II: Antibodies used in Flow Cytometry and Immunofluorescence

Target	Fluorophore	Company	Clone	Cat #	Application	Corresponding Isotype	Company	Cat #
CD3	PerCP	BD	SP34-2	552851	Flow Cytometry	<i>Used in Amnis analysis, no isotype</i>	---	---
CD3	unconjugated	BD	UCHT1	550368	Confocal	Goat-anti-mouse IgG1-A488 (1:2000)	Invitrogen	A21121
CD11b	APC-Cy7	BD	ICRF44 (44)	580914	Flow Cytometry	APC-Cy7 Ms IgG1k	BD	557873
CD11c	BV510	BD	B-ly6	563026	Flow Cytometry	BV510 Ms IgG1k	BD	562946
CD14	Alexa 488	BD	M5E2	557700	Flow Cytometry	Alexa 488 Ms IgG2ak	BD	557703
CD14	APC	Invitrogen	Tuk4	MHCD1405	Confocal	Goat-anti-mouse IgG2a-A647 (1:300)	Invitrogen	A21241
CD16	eFluor 450	ebio	CB16	8048-0168-025	Flow Cytometry	Mouse IgG1k e450	ebio	48-4714-82
CD16	FITC	Invitrogen	3G8	MHCD1601	Confocal	Goat-anti-mouse IgG1-Anti-FITC (1:200)	Invitrogen	A11096
CD18	PerCP	Abcam	GRF1	ab91154	Flow Cytometry	Mouse IgG1 PerCP	Abcam	ab118658
CD31	unconjugated	R&D Systems	Polyclonal	AF806	Confocal	Donkey-anti-sheep IgG-NL557 (1:1500)	R&D Systems	NL010
CD42b	PE	eBio	HIP1	12-0429	Flow Cytometry	<i>Used in Amnis analysis, no isotype</i>	---	---
CD56	APC/Cy7	Biolegend	HCD56	318331	Flow Cytometry	<i>Used in Amnis analysis, no isotype</i>	---	---
CD68	unconjugated	BD	Y1/82A	566059	Confocal	Chicken-anti-goat IgG-A594 (1:150)	Life Technologies	A21468
DEC-205	unconjugated	AbD Serotec	MG38	MCA-2258	Confocal	Goat-anti-mouse IgG2b-568 (1:200)	Invitrogen	A21144
ICAM-1	APC	eBio	HA58	17-0549-41	Flow Cytometry	Mouse IgG1 K Isotype Control APC	ebio	17-4714
VCAM-1	PE	BD	51-10C9	561679	Flow Cytometry	PE Mouse IgG1, κ Isotype Control	BD	555749
VLA-4	BV510	BD	9F10	563458	Flow Cytometry	BV510 Ms IgG1k	BD	562946