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Table SI. Total protein concentration of all samples. Tape strips were obtained from patients with atopic dermatitis (AD, n=8), contact dermatitis (CD, n=8), psoriasis (PSO, n=8) and healthy controls (HC, n=5), and pooled as either tape strip 1 to 8 (n=8), 1 to 4 (n=8), or 5 to 8 (n=8).

Participant no.	Tapestrips pooled	Protein concentration (mg/mL)	Group
1	1-8	0.25	AD
	1-4	0.19	
	5-8	0.13	
2	1-8	0.30	
	1-4	0.16	
	5-8	0.12	
3	1-8	0.30	
	1-4	0.16	
	5-8	0.09	
4	1-8	0.27	
	1-4	0.17	
	5-8	0.14	
5	1-8	0.96	
	1-4	0.88	
	5-8	0.28	
6	5-8	2.10	
	1-8	2.00	
	1-4	1.79	
7	1-8	0.34	
	1-4	0.21	
	5-8	0.20	
8	1-8	0.82	
	1-4	0.54	
	5-8	0.25	
9	1-8	0.15	HC
	1-4	0.11	
	5-8	0.11	
10	1-4	0.27	
	1-8	0.24	
	5-8	0.16	
11	1-8	0.14	
	5-8	0.11	
	1-4	0.10	
12	1-8	0.14	
	5-8	0.13	
	1-4	0.11	
13	1-8	0.18	

	1-4	0.16	
	5-8	0.11	
14	1-8	0.24	CD
	1-4	0.08	
	5-8	0.08	
15	1-8	0.31	
	1-4	0.15	
	5-8	0.13	
16	1-8	0.14	
	5-8	0.14	
	1-4	0.09	
17	5-8	0.17	
	1-4	0.15	
	1-8	0.11	
18	5-8	0.89	
	1-4	0.39	
	1-8	0.15	
19	1-8	0.24	
	1-4	0.11	
	5-8	0.10	
20	1-8	0.13	
	5-8	0.10	
	1-4	0.07	
21	5-8	0.09	
	1-8	0.08	
	1-4	0.07	
22	1-8	0.88	PSO
	1-4	0.72	
	5-8	0.49	
23	1-4	1.61	
	1-8	1.54	
	5-8	1.03	
24	1-8	1.88	
	5-8	1.13	
	1-4	1.03	
25	1-8	0.99	
	5-8	0.79	
	1-4	0.62	
26	1-4	1.41	
	5-8	1.30	
	1-8	0.99	
27	1-8	1.59	
	1-4	1.21	
	5-8	1.16	
28	1-8	1.12	

29	5-8	0.89	
	1-4	0.76	
	1-8	1.67	
	5-8	0.68	
	1-4	0.49	

Table SII. Samples above limit of detection (LOD) for patients with atopic dermatitis (AD), n (%). Tape strips were obtained from patients with AD (n=8) and pooled as either tape strip 1 to 8 (n=8), 1 to 4 (n=8), or 5 to 8 (n=8). All protein assays from the Target Inflammation panel are presented. Selected assays are marked in bold.

^a Samples with “No data” were excluded. One AD patient generated “No data” for tape strip 1 to 8 in all 92 assays. Another AD patient generated “No data” for tape strip 1 to 8 in three assays: IL-10RA, IL-12B, CXCL10

	AD, total n=24^a	AD, 1 to 8 n=8^a	AD, 1 to 4 n=8	AD, 5 to 8 n=8
Interleukins				
IL-1 alpha	23 (100)	7 (100)	8 (100)	8 (100)
IL-2	1 (4.3)	1 (14.3)	0 (0)	0 (0)
IL-2RB	2 (8.7)	0 (0)	1 (12.5)	1 (12.5)
IL-4	0 (0)	0 (0)	0 (0)	0 (0)
IL-5	3 (13.0)	1 (14.3)	0 (0)	2 (25.0)
IL-6	21 (91.3)	7 (100)	7 (87.5)	7 (87.5)
IL-7	1 (4.3)	0 (0)	0 (0)	1 (12.5)
IL-8	23 (100)	7 (100)	8 (100)	8 (100)
IL-10	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RA	3 (13.6)	0 (0)	0 (0)	3 (37.5)
IL-10RB	17 (73.9)	5 (71.4)	6 (75.0)	6 (75.0)
IL-12B	21 (95.5)	6 (100)	7 (87.5)	8 (100)
IL-13	9 (39.1)	2 (28.6)	2 (25.0)	5 (62.5)
IL-15RA	12 (52.2)	6 (85.7)	2 (25.0)	4 (50.0)
IL-17A	6 (26.1)	1 (14.3)	3 (37.5)	2 (25.0)
IL-17C	22 (95.7)	7 (100)	8 (100)	7 (87.5)
IL-18	23 (100)	7 (100)	8 (100)	8 (100)
IL-18R1	23 (100)	7 (100)	8 (100)	8 (100)
IL-20	4 (17.4)	1 (14.3)	1 (12.5)	2 (25.0)
IL-20RA	2 (8.7)	1 (14.3)	0 (0)	1 (12.5)
IL-22RA1	21 (91.3)	7 (100)	7 (87.5)	7 (87.5)
IL-24	2 (8.7)	1 (14.3)	0 (0)	1 (12.5)
IL-33	2 (8.7)	1 (14.3)	0 (0)	1 (12.5)
Chemokines				
CCL2 (MCP-1)	23 (100)	7 (100)	8 (100)	8 (100)
CCL3	23 (100)	7 (100)	8 (100)	8 (100)
CCL4	23 (100)	7 (100)	8 (100)	8 (100)
CCL7 (MCP-3)	7 (30.4)	2 (28.6)	3 (37.5)	2 (25.0)

CCL8 (MCP-2)	15 (65.2)	5 (71.4)	5 (62.5)	5 (62.5)
CCL11	14 (60.9)	4 (57.1)	4 (50.0)	6 (75.0)
CCL13 (MCP-4)	23 (100)	7 (100)	8 (100)	8 (100)
CCL19	18 (78.3)	7 (100)	5 (62.5)	6 (75.0)
CCL20	23 (100)	7 (100)	8 (100)	8 (100)
CCL23	23 (100)	7 (100)	8 (100)	8 (100)
CCL25	6 (26.1)	1 (14.3)	2 (25.0)	3 (37.5)
CCL28	13 (56.5)	3 (42.3)	4 (50.0)	6 (75.0)
CX3CL1	7 (30.4)	5 (71.4)	1 (12.5)	1 (12.5)
CXCL1	23 (100)	7 (100)	8 (100)	8 (100)
CXCL5	23 (100)	7 (100)	8 (100)	8 (100)
CXCL6	23 (100)	7 (100)	8 (100)	8 (100)
CXCL9	22 (95.7)	7 (100)	7 (87.5)	8 (100)
CXCL10	21 (95.5)	6 (100)	8 (100)	7 (87.5)
CXCL11	13 (56.5)	4 (57.1)	5 (62.5)	4 (50.0)
Cytokines				
CSF-1	23 (100)	7 (100)	8 (100)	8 (100)
IFN-γ	4 (17.4)	1 (14.3)	1 (12.5)	2 (25.0)
OSM	23 (100)	7 (100)	8 (100)	8 (100)
TNF	23 (100)	7 (100)	8 (100)	8 (100)
TNF-beta	9 (39.1)	2 (28.6)	3 (37.5)	4 (50.0)
TNFRSF9	23 (100)	7 (100)	8 (100)	8 (100)
TNFSF14	22 (95.7)	7 (100)	8 (100)	7 (87.5)
TRAIL (TNFSF10)	23 (100)	7 (100)	8 (100)	8 (100)
TRANCE (TNFSF11)	22 (95.7)	7 (100)	8 (100)	7 (87.5)
TSLP	10 (43.5)	4 (57.1)	3 (37.5)	3 (37.5)
TWEAK (TNFSF12)	23 (100)	7 (100)	8 (100)	8 (100)
Miscellaneous				
4E-BP1	23 (100)	7 (100)	8 (100)	8 (100)
ADA	23 (100)	7 (100)	8 (100)	8 (100)
ARTN	5 (21.7)	2 (28.6)	1 (12.5)	2 (25.0)
AXIN1	12 (52.2)	4 (57.1)	4 (50.0)	4 (50.0)
Beta-NGF	0 (0)	0 (0)	0 (0)	0 (0)
CASP-8	23 (100)	7 (100)	8 (100)	8 (100)
CD5	23 (100)	7 (100)	8 (100)	8 (100)
CD6	18 (78.3)	6 (85.7)	6 (75.0)	6 (75.0)
CD8A	11 (47.8)	3 (42.9)	2 (25.0)	6 (75.0)
CD40	23 (100)	7 (100)	8 (100)	8 (100)
CD244	6 (26.1)	1 (14.3)	2 (25.0)	3 (37.5)
CDCP1	23 (100)	7 (100)	8 (100)	8 (100)
CST5	23 (100)	7 (100)	8 (100)	8 (100)
DNER	23 (100)	7 (100)	8 (100)	8 (100)

S100A12	23 (100)	7 (100)	8 (100)	8 (100)
FGF-5	4 (17.4)	2 (28.6)	0 (0)	2 (25.0)
FGF-19	13 (56.5)	3 (42.9)	6 (75.0)	4 (50.0)
FGF-21	4 (17.4)	2 (28.6)	1 (12.5)	1 (12.5)
FGF-23	2 (8.7)	2 (28.6)	0 (0)	0 (0)
Flt3L	17 (73.9)	5 (71.4)	7 (87.5)	5 (62.5)
GDNF	4 (17.4)	3 (42.9)	0 (0)	1 (12.5)
HGF	23 (100)	7 (100)	8 (100)	8 (100)
LAP TGF-beta-1	23 (100)	7 (100)	8 (100)	8 (100)
LIF	21 (91.3)	7 (100)	8 (100)	6 (75.0)
LIF-R	10 (43.5)	4 (57.1)	2 (25.0)	4 (50.0)
MMP-1	23 (100)	7 (100)	8 (100)	8 (100)
MMP-10	22 (95.7)	7 (100)	8 (100)	7 (87.5)
NRTN	3 (13.0)	1 (14.3)	0 (0)	2 (25.0)
NT-3	1 (4.3)	1 (14.3)	0 (0)	0 (0)
OPG (TNFRSF11B)	22 (95.7)	7 (100)	8 (100)	7 (87.5)
PD-L1 (CD274)	19 (82.6)	7 (100)	6 (75.0)	6 (75.0)
SCF (KITLG)	12 (52.2)	3 (42.9)	6 (75.0)	3 (37.5)
SIRT2	21 (91.3)	6 (85.7)	7 (87.5)	8 (100)
SLAMF1	2 (8.7)	2 (28.6)	0 (0)	0 (0)
ST1A1 (SULT1A1)	7 (30.4)	4 (57.1)	1 (12.5)	2 (25.0)
STAMBP	23 (100)	7 (100)	8 (100)	8 (100)
TGF-alpha	19 (82.6)	7 (100)	6 (75.0)	6 (75.0)
uPA (PLAU)	23 (100)	7 (100)	8 (100)	8 (100)
VEGFA	23 (100)	7 (100)	8 (100)	8 (100)

AD: Atopic dermatitis.

Table SIII. Samples above limit of detection (LOD) for patients with contact dermatitis (CD), n (%). Tape strips were obtained from patients with CD (n=8) and pooled as either tape strip 1 to 8 (n=8), 1 to 4 (n=8), or 5 to 8 (n=8). All protein assays from the Target Inflammation panel are presented. Selected assays are marked in bold.

^a Samples with “No data” were excluded. One CD patient generated “No data” for tape strip 1 to 8 in all 92 assays.

	CD, total n=24^a	CD, 1 to 8 n=8^a	CD, 1 to 4 n=8	CD, 5 to 8 n=8
Interleukins				
IL-1 alpha	23 (100)	7 (100)	8 (100)	8 (100)
IL-2	0 (0)	0 (0)	0 (0)	0 (0)
IL-2RB	0 (0)	0 (0)	0 (0)	0 (0)
IL-4	0 (0)	0 (0)	0 (0)	0 (0)
IL-5	2 (8.7)	1 (14.3)	1 (12.5)	0 (0)
IL-6	14 (60.9)	3 (42.9)	7 (87.5)	4 (50.0)
IL-7	1 (4.3)	1 (14.3)	0 (0)	0 (0)
IL-8	23 (100)	7 (100)	8 (100)	8 (100)
IL-10	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RA	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RB	8 (34.8)	2 (28.6)	4 (50.0)	2 (25.0)
IL-12B	10 (43.5)	3 (42.9)	3 (37.5)	4 (50.0)
IL-13	4 (17.4)	2 (28.6)	1 (12.5)	1 (12.5)
IL-15RA	13 (56.5)	5 (71.4)	5 (62.5)	3 (37.5)
IL-17A	7 (30.4)	2 (28.6)	4 (50.0)	1 (12.5)
IL-17C	9 (39.1)	4 (57.1)	2 (25.0)	3 (37.5)
IL-18	23 (100)	7 (100)	8 (100)	8 (100)
IL-18R1	20 (87.0)	6 (85.7)	7 (87.5)	7 (87.5)
IL-20	0 (0)	0 (0)	0 (0)	0 (0)
IL-20RA	2 (8.7)	0 (0)	1 (12.5)	1 (12.5)
IL-22RA1	16 (69.6)	5 (71.4)	6 (75.0)	5 (62.5)
IL-24	0 (0)	0 (0)	0 (0)	0 (0)
IL-33	0 (0)	0 (0)	0 (0)	0 (0)
Chemokines				
CCL2 (MCP-1)	20 (87.0)	5 (71.4)	8 (100)	7 (87.5)
CCL3	22 (95.7)	6 (85.7)	8 (100)	8 (100)
CCL4	17 (73.9)	4 (57.1)	6 (75.0)	7 (87.5)
CCL7 (MCP-3)	0 (0)	0 (0)	0 (0)	0 (0)
CCL8 (MCP-2)	4 (17.4)	1 (14.3)	1 (12.5)	2 (25.0)
CCL11	4 (17.4)	0 (0)	2 (25.0)	2 (25.0)
CCL13 (MCP-4)	11 (47.8)	2 (28.6)	5 (62.5)	4 (50.0)
CCL19	14 (60.9)	4 (57.1)	5 (62.5)	5 (62.5)
CCL20	10 (43.5)	2 (28.6)	5 (62.5)	3 (37.5)
CCL23	12 (52.2)	3 (42.9)	5 (62.5)	4 (50.0)
CCL25	0 (0)	0 (0)	0 (0)	0 (0)

CCL28	5 (21.7)	2 (28.6)	2 (25.0)	1 (12.5)
CX3CL1	2 (8.7)	1 (14.3)	0 (0)	1 (12.5)
CXCL1	22 (95.7)	7 (100)	8 (100)	7 (87.5)
CXCL5	18 (78.3)	4 (57.1)	7 (87.5)	7 (87.5)
CXCL6	22 (95.7)	7 (100)	8 (100)	7 (87.5)
CXCL9	16 (69.6)	5 (71.4)	6 (75.0)	5 (62.5)
CXCL10	14 (60.9)	4 (57.1)	6 (75.0)	4 (50.0)
CXCL11	8 (34.8)	3 (42.9)	3 (37.5)	2 (25.0)
Cytokines				
CSF-1	23 (100)	7 (100)	8 (100)	8 (100)
IFN-γ	1 (4.3)	0 (0)	0 (0)	1 (12.5)
OSM	17 (73.9)	5 (71.4)	6 (75.0)	6 (75.0)
TNF	14 (60.9)	4 (57.1)	5 (62.5)	5 (62.5)
TNF-beta	5 (21.7)	1 (14.3)	3 (37.5)	1 (12.5)
TNFRSF9	23 (100)	7 (100)	8 (100)	8 (100)
TNFSF14	14 (60.9)	4 (57.1)	6 (75.0)	4 (50.0)
TRAIL (TNFSF10)	16 (69.6)	5 (71.4)	6 (75.0)	5 (62.5)
TRANCE (TNFSF11)	4 (17.4)	3 (42.9)	0 (0)	1 (12.5)
TSLP	3 (13.0)	0 (0)	1 (12.5)	2 (25.0)
TWEAK (TNFSF12)	16 (69.6)	5 (71.4)	6 (75.0)	5 (62.5)
Miscellaneous				
4E-BP1	12 (52.2)	3 (42.9)	5 (62.5)	4 (50.0)
ADA	22 (95.7)	7 (100)	7 (87.5)	8 (100)
ARTN	0 (0)	0 (0)	0 (0)	0 (0)
AXIN1	4 (17.4)	1 (14.3)	2 (25.0)	1 (12.5)
Beta-NGF	0 (0)	0 (0)	0 (0)	0 (0)
CASP-8	16 (69.6)	5 (71.4)	7 (87.5)	4 (50.0)
CD5	14 (60.9)	4 (57.1)	5 (62.5)	5 (62.5)
CD6	16 (69.6)	6 (85.7)	5 (62.5)	5 (62.5)
CD8A	8 (34.8)	4 (57.1)	2 (25.0)	2 (25.0)
CD40	23 (100)	7 (100)	8 (100)	8 (100)
CD244	0 (0)	0 (0)	0 (0)	0 (0)
CDCP1	23 (100)	7 (100)	8 (100)	8 (100)
CST5	22 (95.7)	7 (100)	8 (100)	7 (87.5)
DNER	23 (100)	7 (100)	8 (100)	8 (100)
S100A12	23 (100)	7 (100)	8 (100)	8 (100)
FGF-5	2 (8.7)	2 (28.6)	0 (0)	0 (0)
FGF-19	5 (21.7)	2 (28.6)	2 (25.0)	1 (12.5)
FGF-21	5 (21.7)	1 (14.3)	3 (37.5)	1 (12.5)
FGF-23	5 (21.7)	1 (14.3)	3 (37.5)	1 (12.5)
Flt3L	10 (43.5)	3 (42.9)	3 (37.5)	4 (50.0)
GDNF	5 (21.7)	1 (14.3)	2 (25.0)	2 (25.0)

HGF	22 (95.7)	7 (100)	7 (87.5)	8 (100)
LAP TGF-beta-1	15 (65.2)	5 (71.4)	6 (75.0)	4 (50.0)
LIF	9 (39.1)	4 (57.1)	4 (50.0)	1 (12.5)
LIF-R	1 (4.3)	0 (0)	0 (0)	1 (12.5)
MMP-1	18 (78.3)	5 (71.4)	7 (87.5)	6 (75.0)
MMP-10	15 (65.2)	5 (71.4)	6 (75.0)	4 (50.0)
NRTN	3 (13.0)	1 (14.3)	1 (12.5)	1 (12.5)
NT-3	1 (4.3)	0 (0)	0 (0)	1 (12.5)
OPG (TNFRSF11B)	15 (65.2)	5 (71.4)	5 (62.5)	5 (62.5)
PD-L1 (CD274)	4 (17.4)	1 (14.3)	2 (25.0)	1 (12.5)
SCF (KITLG)	4 (17.4)	2 (28.6)	1 (12.5)	1 (12.5)
SIRT2	6 (26.1)	2 (28.6)	1 (12.5)	3 (37.5)
SLAMF1	1 (4.3)	0 (0)	1 (12.5)	0 (0)
ST1A1 (SULT1A1)	0 (0)	0 (0)	0 (0)	0 (0)
STAMBP	15 (65.2)	5 (71.4)	5 (62.5)	5 (62.5)
TGF-alpha	9 (39.1)	2 (28.6)	3 (37.5)	4 (50.0)
uPA (PLAU)	23 (100)	7 (100)	8 (100)	8 (100)
VEGFA	23 (100)	7 (100)	8 (100)	8 (100)

CD: Contact dermatitis.

Table SIV. Samples above limit of detection (LOD) for patients with psoriasis, n (%). Tape strips were obtained from patients with psoriasis (n=8) and pooled as either tape strip 1 to 8 (n=8), 1 to 4 (n=8), or 5 to 8 (n=8). All protein assays from the Target Inflammation panel are presented. Selected assays are marked in bold.

	PSO, total n=24	PSO, 1 to 8 n=8	PSO, 1 to 4 n=8	PSO, 5 to 8 n=8
Interleukins				
IL-1 alpha	24 (100)	8 (100)	8 (100)	8 (100)
IL-2	0 (0)	0 (0)	0 (0)	0 (0)
IL-2RB	0 (0)	0 (0)	0 (0)	0 (0)
IL-4	0 (0)	0 (0)	0 (0)	0 (0)
IL-5	0 (0)	0 (0)	0 (0)	0 (0)
IL-6	23 (95.8)	8 (100)	7 (87.5)	8 (100)
IL-7	0 (0)	0 (0)	0 (0)	0 (0)
IL-8	24 (100)	8 (100)	8 (100)	8 (100)
IL-10	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RA	1 (4.2)	0 (0)	0 (0)	1 (12.5)
IL-10RB	23 (95.8)	8 (100)	7 (87.5)	8 (100)
IL-12B	24 (100)	8 (100)	8 (100)	8 (100)
IL-13	0 (0)	0 (0)	0 (0)	0 (0)
IL-15RA	19 (79.2)	7 (87.5)	6 (75.0)	6 (75.0)
IL-17A	22 (91.7)	8 (100)	7 (87.5)	7 (87.5)
IL-17C	24 (100)	8 (100)	8 (100)	8 (100)
IL-18	24 (100)	8 (100)	8 (100)	8 (100)
IL-18R1	24 (100)	8 (100)	8 (100)	8 (100)
IL-20	20 (83.3)	6 (75.0)	7 (87.5)	7 (87.5)
IL-20RA	3 (12.5)	2 (25.0)	0 (0)	1 (12.5)
IL-22RA1	24 (100)	8 (100)	8 (100)	8 (100)
IL-24	0 (0)	0 (0)	0 (0)	0 (0)
IL-33	1 (4.2)	1 (12.5)	0 (0)	0 (0)
Chemokines				
CCL2 (MCP-1)	24 (100)	8 (100)	8 (100)	8 (100)
CCL3	24 (100)	8 (100)	8 (100)	8 (100)
CCL4	24 (100)	8 (100)	8 (100)	8 (100)
CCL7 (MCP-3)	21 (91.3)	7 (87.5)	7 (87.5)	7 (87.5)
CCL8 (MCP-2)	22 (91.7)	7 (87.5)	8 (100)	7 (87.5)
CCL11	12 (50.0)	4 (50.0)	3 (37.5)	5 (62.5)
CCL13 (MCP-4)	23 (95.8)	7 (87.5)	8 (100)	8 (100)
CCL19	20 (83.3)	5 (62.5)	8 (100)	7 (87.5)
CCL20	24 (100)	8 (100)	8 (100)	8 (100)
CCL23	23 (95.8)	7 (87.5)	8 (100)	8 (100)
CCL25	2 (8.3)	1 (12.5)	1 (12.5)	0 (0.0)

CCL28	20 (83.3)	7 (87.5)	7 (87.5)	6 (75.0)
CX3CL1	6 (25.0)	2 (25.0)	2 (25.0)	2 (25.0)
CXCL1	24 (100)	8 (100)	8 (100)	8 (100)
CXCL5	23 (95.8)	7 (87.5)	8 (100)	8 (100)
CXCL6	24 (100)	8 (100)	8 (100)	8 (100)
CXCL9	24 (100)	8 (100)	8 (100)	8 (100)
CXCL10	23 (95.8)	7 (87.5)	8 (100)	8 (100)
CXCL11	23 (95.8)	7 (87.5)	8 (100)	8 (100)
Cytokines				
CSF-1	24 (100)	8 (100)	8 (100)	8 (100)
IFN-γ	20 (83.3)	7 (87.5)	8 (100)	5 (62.5)
OSM	24 (100)	8 (100)	8 (100)	8 (100)
TNF	24 (100)	8 (100)	8 (100)	8 (100)
TNF-beta	22 (91.7)	7 (87.5)	8 (100)	7 (87.5)
TNFRSF9	24 (100)	8 (100)	8 (100)	8 (100)
TNFSF14	24 (100)	8 (100)	8 (100)	8 (100)
TRAIL (TNFSF10)	24 (100)	8 (100)	8 (100)	8 (100)
TRANCE (TNFSF11)	22 (91.7)	7 (87.5)	7 (87.5)	8 (100)
TSLP	20 (83.3)	6 (75.0)	7 (87.5)	7 (87.5)
TWEAK (TNFSF12)	24 (100)	8 (100)	8 (100)	8 (100)
Miscellaneous				
4E-BP1	24 (100)	8 (100)	8 (100)	8 (100)
ADA	24 (100)	8 (100)	8 (100)	8 (100)
ARTN	2 (8.3)	0 (0)	0 (0)	2 (25.0)
AXIN1	23 (95.8)	7 (87.5)	8 (100)	8 (100)
Beta-NGF	0 (0)	0 (0)	0 (0)	0 (0)
CASP-8	24 (100)	8 (100)	8 (100)	8 (100)
CD5	24 (100)	8 (100)	8 (100)	8 (100)
CD6	23 (95.8)	8 (100)	8 (100)	7 (87.5)
CD8A	5 (20.8)	2 (25.0)	2 (25.0)	1 (12.5)
CD40	24 (100)	8 (100)	8 (100)	8 (100)
CD244	2 (8.3)	0 (0)	1 (12.5)	1 (12.5)
CDCP1	24 (100)	8 (100)	8 (100)	8 (100)
CST5	24 (100)	8 (100)	8 (100)	8 (100)
DNER	24 (100)	8 (100)	8 (100)	8 (100)
S100A12	24 (100)	8 (100)	8 (100)	8 (100)
FGF-5	0 (0)	0 (0)	0 (0)	0 (0)
FGF-19	14 (58.3)	4 (50.0)	5 (62.5)	5 (62.5)
FGF-21	2 (8.3)	1 (12.5)	0 (0)	1 (12.5)
FGF-23	3 (12.5)	1 (12.5)	1 (12.5)	1 (12.5)

Flt3L	23 (95.8)	7 (87.5)	8 (100)	8 (100)
GDNF	3 (12.5)	1 (12.5)	2 (25.0)	0 (0)
HGF	24 (100)	8 (100)	8 (100)	8 (100)
LAP TGF-beta-1	24 (100)	8 (100)	8 (100)	8 (100)
LIF	24 (100)	8 (100)	8 (100)	8 (100)
LIF-R	3 (12.5)	1 (12.5)	1 (12.5)	1 (12.5)
MMP-1	24 (100)	8 (100)	8 (100)	8 (100)
MMP-10	24 (100)	8 (100)	8 (100)	8 (100)
NRTN	3 (12.5)	1 (12.5)	1 (12.5)	1 (12.5)
NT-3	1 (4.2)	0 (0)	1 (12.5)	0 (0)
OPG (TNFRSF11B)	24 (100)	8 (100)	8 (100)	8 (100)
PD-L1 (CD274)	24 (100)	8 (100)	8 (100)	8 (100)
SCF (KITLG)	7 (29.2)	2 (25.0)	1 (12.5)	4 (50.0)
SIRT2	24 (100)	8 (100)	8 (100)	8 (100)
SLAMF1	0 (0)	0 (0)	0 (0)	0 (0)
ST1A1 (SULT1A1)	15 (62.5)	5 (62.5)	5 (62.5)	5 (62.5)
STAMBP	24 (100)	8 (100)	8 (100)	8 (100)
TGF-alpha	23 (95.8)	8 (100)	7 (87.5)	8 (100)
uPA (PLAU)	24 (100)	8 (100)	8 (100)	8 (100)
VEGFA	24 (100)	8 (100)	8 (100)	8 (100)

PSO: Psoriasis.

Table SV. Samples above limit of detection (LOD) for healthy controls, n (%). Tape strips were obtained from healthy controls (n=5) and pooled as either tape strip 1 to 8 (n=5), 1 to 4 (n=5), or 5 to 8 (n=5). All protein assays from the Target Inflammation panel are presented. Selected assays are marked in bold.

	HC, total n=15	HC, 1 to 8 n=5	HC, 1 to 4 n=5	HC, 5 to 8 n=5
Interleukins				
IL-1 alpha	15 (100)	5 (100)	5 (100)	5 (100)
IL-2	1 (6.7)	0 (0)	0 (0)	1 (20.0)
IL-2RB	1 (6.7)	0 (0)	0 (0)	1 (20.0)
IL-4	0 (0)	0 (0)	0 (0)	0 (0)
IL-5	0 (0)	0 (0)	0 (0)	0 (0)
IL-6	1 (6.7)	0 (0)	0 (0)	1 (20.0)
IL-7	0 (0)	0 (0)	0 (0)	0 (0)
IL-8	14 (93.3)	5 (100)	5 (100)	4 (80.0)
IL-10	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RA	0 (0)	0 (0)	0 (0)	0 (0)
IL-10RB	5 (33.3)	2 (40.0)	3 (60.0)	0 (0)
IL-12B	2 (13.3)	0 (0)	1 (20.0)	1 (20.0)
IL-13	0 (0)	0 (0)	0 (0)	0 (0)
IL-15RA	2 (13.3)	1 (20.0)	1 (20.0)	0 (0)
IL-17A	1 (6.7)	1 (20.0)	0 (0)	0 (0)
IL-17C	0 (0)	0 (0)	0 (0)	0 (0)
IL-18	15 (100)	5 (100)	5 (100)	5 (100)
IL-18R1	14 (93.3)	5 (100)	5 (100)	4 (80.0)
IL-20	0 (0)	0 (0)	0 (0)	0 (0)
IL-20RA	1 (6.7)	0 (0)	1 (20.0)	0 (0)
IL-22RA1	7 (46.7)	2 (40.0)	3 (60.0)	2 (40.0)
IL-24	0 (0)	0 (0)	0 (0)	0 (0)
IL-33	0 (0)	0 (0)	0 (0)	0 (0)
Chemokines				
CCL2 (MCP-1)	15 (100)	5 (100)	5 (100)	5 (100)
CCL3	8 (53.3)	4 (80.0)	2 (40.0)	2 (40.0)
CCL4	2 (13.3)	0 (0)	1 (20.0)	1 (20.0)
CCL7 (MCP-3)	0 (0)	0 (0)	0 (0)	0 (0)
CCL8 (MCP-2)	0 (0)	0 (0)	0 (0)	0 (0)
CCL11	2 (13.3)	0 (0)	1 (20.0)	1 (20.0)
CCL13 (MCP-4)	6 (40.0)	2 (40.0)	1 (20.0)	3 (60.0)
CCL19	1 (6.7)	0 (0)	0 (0)	1 (20.0)
CCL20	1 (6.7)	0 (0)	0 (0)	1 (20.0)
CCL23	0 (0)	0 (0)	0 (0)	0 (0)
CCL25	0 (0)	0 (0)	0 (0)	0 (0)
CCL28	0 (0)	0 (0)	0 (0)	0 (0)
CX3CL1	3 (20.0)	0 (0)	3 (60.0)	0 (0)
CXCL1	10 (66.7)	4 (80.0)	4 (80.0)	2 (40.0)

CXCL5	11 (73.3)	4 (80.0)	4 (80.0)	3 (60.0)
CXCL6	11 (73.3)	5 (100)	3 (60.0)	3 (60.0)
CXCL9	3 (20.0)	2 (40.0)	0 (0)	1 (20.0)
CXCL10	1 (6.7)	1 (20.0)	0 (0)	0 (0)
CXCL11	0 (0)	0 (0)	0 (0)	0 (0)
Cytokines				
CSF-1	15 (100)	5 (100)	5 (100)	5 (100)
IFN-γ	0 (0)	0 (0)	0 (0)	0 (0)
OSM	2 (13.3)	1 (20.0)	0 (0)	1 (20.0)
TNF	3 (20.0)	0 (0)	1 (20.0)	2 (40.0)
TNF-beta	1 (6.7)	1 (20.0)	0 (0)	0 (0)
TNFRSF9	9 (60.0)	3 (60.0)	2 (40.0)	4 (8.0)
TNFSF14	2 (13.3)	0 (0)	1 (20.0)	1 (20.0)
TRAIL (TNFSF10)	4 (26.7)	1 (20.0)	2 (40.0)	1 (20.0)
TRANCE (TNFSF11)	1 (6.7)	0 (0)	1 (20.0)	0 (0)
TSLP	0 (0)	0 (0)	0 (0)	0 (0)
TWEAK (TNFSF12)	14 (93.3)	5 (100)	4 (80.0)	5 (100)
Miscellaneous				
4E-BP1	0 (0)	0 (0)	0 (0)	0 (0)
ADA	15 (100)	5 (100)	5 (100)	5 (100)
ARTN	0 (0)	0 (0)	0 (0)	0 (0)
AXIN1	0 (0)	0 (0)	0 (0)	0 (0)
Beta-NGF	0 (0)	0 (0)	0 (0)	0 (0)
CASP-8	5 (33.3)	3 (60.0)	0 (0)	2 (40.0)
CD5	0 (0)	0 (0)	0 (0)	0 (0)
CD6	5 (33.3)	1 (20.0)	2 (40.0)	2 (40.0)
CD8A	4 (26.7)	0 (0)	3 (60.0)	1 (20.0)
CD40	15 (100)	5 (100)	5 (100)	5 (100)
CD244	0 (0)	0 (0)	0 (0)	0 (0)
CDCP1	15 (100)	5 (100)	5 (100)	5 (100)
CST5	12 (80.0)	5 (100)	4 (80.0)	3 (60.0)
DNER	15 (100)	5 (100)	5 (100)	5 (100)
S100A12	8 (53.3)	4 (80.0)	3 (60.0)	1 (20.0)
FGF-5	0 (0)	0 (0)	0 (0)	0 (0)
FGF-19	1 (6.7)	0 (0)	1 (20.0)	0 (0)
FGF-21	1 (6.7)	0 (0)	0 (0)	1 (20.0)
FGF-23	0 (0)	0 (0)	0 (0)	0 (0)
Flt3L	3 (20.0)	2 (40.0)	1 (20.0)	0 (0)
GDNF	1 (6.7)	0 (0)	1 (20.0)	0 (0)
HGF	14 (93.3)	5 (100)	5 (100)	4 (80.0)
LAP TGF-beta-1	4 (26.7)	1 (20.0)	2 (40.0)	1 (20.0)
LIF	11 (73.3)	5 (100)	4 (80.0)	2 (40.0)

LIF-R	4 (26.7)	2 (40.0)	2 (40.0)	0 (0)
MMP-1	2 (13.3)	0 (0)	1 (20.0)	1 (20.0)
MMP-10	2 (13.3)	1 (20.0)	0 (0)	1 (20.0)
NRTN	1 (6.7)	0 (0)	0 (0)	1 (20.0)
NT-3	0 (0)	0 (0)	0 (0)	0 (0)
OPG (TNFRSF11B)	4 (26.7)	2 (40.0)	1 (20.0)	1 (20.0)
PD-L1 (CD274)	0 (0)	0 (0)	0 (0)	0 (0)
SCF (KITLG)	0 (0)	0 (0)	0 (0)	0 (0)
SIRT2	0 (0)	0 (0)	0 (0)	0 (0)
SLAMF1	0 (0)	0 (0)	0 (0)	0 (0)
ST1A1 (SULT1A1)	0 (0)	0 (0)	0 (0)	0 (0)
STAMBP	5 (33.3)	3 (60.0)	1 (20.0)	1 (20.0)
TGF-alpha	1 (6.7)	0 (0)	0 (0)	1 (20.0)
uPA (PLAU)	15 (100)	5 (100)	5 (100)	5 (100)
VEGFA	15 (100)	5 (100)	5 (100)	5 (100)

HC: Healthy controls.

Table SVI. LOD and mean NPX values for assayed proteins, mean (standard deviation). Mean NPX values with standard deviations (parenthesized) for all assayed proteins, stratified by disease group and sample type (tape strips obtained from patients pooled as either 1 to 8, 1 to 4, or 5 to 8).

		AD			CD			PSO			HC			
Assay	LOD	1-8	1-4	5-8	1-8	1-4	5-8	1-8	1-4	5-8	1-8	1-4	5-8	
Interleukins														
IL-1 alpha	2.025	7.903 (1.792)	7.332 (1.465)	6.405 (1.895)	8.002 (1.261)	7.037 (1.633)	7.157 (1.94)	7.556 (1.114)	7.239 (1.106)	7.091 (1.083)	10.466 (0.417)	10.174 (0.577)	10.028 (0.579)	
IL-2	-0.962	-1.422 (0.34)	-1.694 (0.282)	-1.491 (0.257)	-1.55 (0.328)	-1.622 (0.314)	-1.717 (0.371)	-1.608 (0.204)	-1.699 (0.31)	-1.696 (0.411)	-1.587 (0.177)	-1.614 (0.269)	-1.519 (0.374)	
IL-2RB	-1.253	-1.758 (0.273)	-1.985 (0.57)	-1.885 (0.633)	-2.007 (0.402)	-1.973 (0.365)	-1.954 (0.423)	-2.133 (0.289)	-2.161 (0.314)	-2.185 (0.457)	-2.045 (0.309)	-2.073 (0.372)	-1.791 (0.474)	
IL-4	-1.23	-2.058 (0.22)	-2.151 (0.33)	-1.801 (0.304)	-2.191 (0.49)	-2.159 (0.512)	-2.013 (0.333)	-2.184 (0.507)	-2.367 (0.237)	-2.257 (0.403)	-1.95 (0.299)	-1.913 (0.321)	-2.002 (0.425)	
IL-5	-0.822	-1.108 (0.375)	-1.37 (0.281)	-1.177 (0.522)	-1.222 (0.383)	-1.346 (0.413)	-1.419 (0.329)	-1.256 (0.208)	-1.42 (0.308)	-1.358 (0.275)	-1.531 (0.206)	-1.455 (0.362)	-1.584 (0.298)	
IL-6	-1.992	-0.098 (2.211)	-0.028 (2.25)	-0.427 (2.226)	-1.708 (0.791)	-1.743 (0.284)	-1.779 (0.686)	0.696 (1.353)	1.041 (1.66)	0.826 (1.448)	-2.385 (0.214)	-2.259 (0.179)	-2.302 (0.451)	
IL-7	-1.021	-1.552 (0.289)	-1.716 (0.278)	-1.251 (0.694)	-1.526 (0.282)	-1.554 (0.179)	-1.492 (0.334)	-1.522 (0.187)	-1.538 (0.16)	-1.563 (0.244)	-1.561 (0.145)	-1.617 (0.103)	-1.655 (0.223)	
IL-8	-0.33	10.445 (1.538)	9.66 (2.381)	9.454 (2.237)	4.439 (2.981)	5.306 (2.39)	5.079 (3.008)	11.849 (1.878)	11.869 (1.619)	11.988 (1.284)	1.565 (1.286)	1.482 (1.054)	1.097 (2.203)	
IL-10	-1.25	-1.937 (0.519)	-2.094 (0.411)	-2.015 (0.511)	-2.003 (0.367)	-2.146 (0.37)	-2.083 (0.238)	-2.221 (0.321)	-1.826 (0.145)	-2.191 (0.393)	-1.924 (0.512)	-2.048 (0.472)	-1.867 (0.217)	
IL-10RA	-1.977	-2.207 (0.055)	-2.221 (0.155)	-1.63 (1.818)	-2.214 (0.126)	-2.277 (0.251)	-2.313 (0.165)	-2.295 (0.124)	-2.292 (0.154)	-2.278 (0.239)	-2.213 (0.114)	-2.264 (0.073)	-2.273 (0.163)	
IL-10RB	-1.924	-0.707 (2.358)	-1.596 (0.489)	-1.411 (1.015)	-2.039 (0.258)	-2.008 (0.285)	-2.154 (0.304)	-0.65 (0.406)	-0.726 (0.637)	-0.828 (0.535)	-2.035 (0.187)	-1.939 (0.177)	-2.27 (0.298)	
IL-12B	-1.083	0.112 (1.029)	0.307 (1.496)	0.15 (1.199)	-0.482 (1.424)	-0.755 (1.265)	-0.423 (1.953)	7.374 (1.616)	7.098 (3.069)	7.063 (2.926)	-1.303 (0.166)	-1.242 (0.188)	-1.161 (0.229)	
IL-13	-0.641	-0.574 (1.547)	-0.697 (1.112)	-0.231 (0.979)	-1.033 (0.44)	-1.122 (0.236)	-1.095 (0.445)	-1.398 (0.336)	-1.391 (0.233)	-1.358 (0.08)	-1.457 (0.154)	-1.261 (0.366)	-1.071 (0.361)	
IL-15RA	-0.702	1.106 (2.426)	-0.479 (0.79)	-0.409 (0.834)	-0.19 (0.784)	-0.452 (0.614)	-0.662 (0.442)	-0.144 (0.625)	0.125 (0.82)	-0.363 (0.649)	-0.787 (0.209)	-0.836 (0.251)	-1.044 (0.076)	
IL-17A	-0.706	-0.683 (0.808)	-0.55 (1.312)	-0.529 (1.293)	-1.115 (0.492)	-0.835 (0.556)	-1.182 (0.47)	4.115 (1.82)	4.344 (2.296)	4.241 (2.243)	-1.003 (0.312)	-1.256 (0.376)	-1.342 (0.346)	
IL-17C	-0.058	2.207 (1.55)	1.815 (1.41)	1.573 (1.259)	-0.179 (0.514)	-0.249 (0.693)	0.172 (1.134)	6.222 (1.93)	6.415 (2.553)	6.287 (2.497)	-0.747 (0.194)	-0.713 (0.27)	-0.718 (0.167)	
IL-18	-0.745	8.784 (3.113)	10.042 (2.288)	9.796 (1.771)	4.593 (2.142)	3.74 (2.586)	3.877 (2.996)	12.647 (0.881)	12 (0.75)	12.005 (0.61)	3.144 (2.339)	2.005 (2.778)	2.405 (1.65)	
IL-18R1	-1.704	1.922 (2.26)	0.846 (1.304)	0.585 (1.23)	-0.673 (0.97)	-0.793 (0.846)	-0.596 (1.162)	3.894 (0.549)	3.71 (1.124)	3.704 (1.015)	-0.848 (0.796)	-0.684 (1.042)	-1.12 (0.477)	
IL-20	-1.841	-1.722 (1.346)	-2.214 (0.312)	-1.449 (2.155)	-2.349 (0.236)	-2.325 (0.228)	-2.31 (0.247)	-1.734 (0.332)	-1.502 (0.422)	-1.495 (0.27)	-2.435 (0.187)	-2.462 (0.101)	-2.465 (0.135)	
IL-20RA	-1.162	-1.453 (0.187)	-1.488 (0.185)	-1.55 (0.291)	-1.681 (0.291)	-1.633 (0.493)	-1.647 (0.638)	-1.361 (0.461)	-1.567 (0.25)	-1.585 (0.383)	-1.611 (0.323)	-1.671 (0.571)	-1.698 (0.256)	
IL-22RA1	0.523	3.726 (2.392)	2.854 (1.514)	2.38 (1.153)	1.069 (1.134)	1.06 (0.939)	0.916 (1.665)	4.733 (0.739)	4.705 (0.744)	4.67 (0.687)	0.408 (1.419)	1.032 (1.521)	0.381 (0.961)	
IL-24	0.831	1.228 (3.726)	-0.514 (0.505)	0.57 (2.067)	-0.046 (0.316)	-0.454 (0.232)	-0.039 (0.4)	-0.085 (0.503)	-0.072 (0.425)	-0.174 (0.257)	0.251 (0.207)	-0.208 (0.395)	0.117 (0.261)	
IL-33	-0.803	-1.195 (0.376)	-1.417 (0.244)	-1.27 (0.416)	-1.609 (0.303)	-1.584 (0.422)	-1.595 (0.33)	-1.28 (0.393)	-1.321 (0.298)	-1.327 (0.191)	-1.719 (0.216)	-1.675 (0.381)	-1.736 (0.318)	
Chemokines														

CCL2 (MCP-1)	-1.486	5.477 (1.482)	4.773 (1.85)	4.076 (1.884)	1.158 (2.821)	1.457 (1.882)	1.293 (2.329)	5.026 (1.963)	5.29 (1.514)	5.271 (1.37)	0.328 (1.034)	0.524 (1.304)	-0.338 (0.755)
CCL3	-1.919	4.501 (1.416)	3.118 (1.683)	3.209 (1.547)	0.176 (2.244)	0.642 (1.889)	0.711 (2.784)	4.738 (1.797)	4.711 (2.312)	4.741 (2.251)	-1.635 (0.326)	-1.861 (0.27)	-1.663 (0.856)
CCL4	-2.405	1.726 (1.785)	0.513 (1.564)	0.644 (1.684)	-1.64 (1.37)	-1.302 (1.03)	-1.12 (1.187)	2.516 (1.881)	2.655 (2.201)	2.645 (2.292)	-2.7 (0.128)	-2.534 (0.178)	-2.46 (0.52)
CCL7 (MCP-3)	-0.18	-0.376 (1.429)	-0.22 (1.166)	-0.312 (1.295)	-1.095 (0.382)	-0.997 (0.38)	-1.137 (0.405)	1.44 (1.248)	1.703 (1.42)	1.511 (1.273)	-1.198 (0.316)	-1.294 (0.591)	-1.294 (0.385)
CCL8 (MCP-2)	0.188	1.116 (1.602)	1.031 (1.332)	0.9 (1.651)	-0.354 (0.635)	-0.176 (0.402)	-0.354 (0.54)	2.996 (2.367)	3.508 (2.18)	3.401 (2.255)	-0.678 (0.39)	-0.501 (0.156)	-0.806 (0.383)
CCL11	-1.997	-1.432 (1.586)	-1.766 (1.172)	-1.183 (1.843)	-2.303 (0.186)	-2.138 (0.355)	-2.223 (0.278)	-1.94 (0.506)	-1.861 (0.49)	-1.912 (0.372)	-2.563 (0.167)	-2.189 (0.234)	-2.394 (0.295)
CCL13 (MCP-4)	0.408	6.711 (1.789)	6.519 (1.75)	6.315 (1.388)	0.29 (1.937)	0.939 (1.391)	0.98 (1.894)	5.355 (2.954)	6.156 (2.557)	6.069 (2.162)	0.448 (0.784)	0.312 (0.535)	0.59 (0.775)
CCL19	-0.653	0.881 (1.813)	1.162 (2.086)	1.737 (2.235)	-0.286 (1.322)	0.604 (1.64)	0.679 (1.817)	-0.465 (1.029)	0.231 (0.82)	0.091 (0.833)	-1.162 (0.445)	-1.298 (0.225)	-1.359 (0.581)
CCL20	-0.485	3.796 (1.602)	3.891 (2.254)	4.149 (2.039)	-0.208 (1.676)	0.038 (1.444)	-0.186 (1.757)	6.743 (3.71)	7.373 (3.082)	7.659 (3.013)	-1.343 (0.331)	-1.566 (0.262)	-0.433 (1.313)
CCL23	-1.411	1.693 (1.642)	1.279 (1.725)	1 (1.862)	-1.134 (1.041)	-1.035 (0.783)	-0.809 (1.502)	2.615 (1.714)	3.062 (1.121)	2.954 (0.837)	-1.805 (0.187)	-1.826 (0.143)	-1.807 (0.221)
CCL25	-1.376	-1.597 (0.185)	-1.704 (0.302)	-1.079 (1.738)	-1.87 (0.318)	-1.737 (0.254)	-1.752 (0.246)	-1.757 (0.265)	-1.679 (0.192)	-1.723 (0.151)	-1.843 (0.064)	-1.908 (0.21)	-1.883 (0.216)
CCL28	-1.378	-1.142 (0.533)	-1.231 (0.538)	-1.146 (0.691)	-1.657 (0.401)	-1.649 (0.357)	-1.728 (0.42)	-0.923 (0.437)	-0.863 (0.412)	-0.994 (0.403)	-2.009 (0.36)	-1.95 (0.239)	-1.859 (0.273)
CX3CL1	-0.48	-0.265 (0.959)	-0.87 (0.716)	-0.914 (0.534)	-1.171 (0.548)	-1.146 (0.526)	-1.307 (0.488)	-0.777 (0.768)	-0.729 (0.364)	-0.754 (0.467)	-1.094 (0.354)	-0.283 (0.501)	-1.222 (0.445)
CXCL1	-0.542	8.694 (2.069)	8.275 (2.898)	8.063 (2.814)	3.057 (3.36)	4.446 (2.948)	3.936 (3.72)	10.792 (2.642)	11.075 (1.922)	11.327 (1.009)	0.05 (0.891)	0.168 (0.878)	-0.652 (0.718)
CXCL5	-1.014	1.609 (2.128)	1.856 (1.835)	1.93 (2.034)	0.07 (2.197)	0.614 (1.698)	0.584 (1.681)	2.749 (2.286)	3.837 (1.615)	3.762 (1.89)	-0.873 (0.399)	-0.656 (0.384)	-0.784 (0.693)
CXCL6	-1.938	5.058 (1.188)	5.392 (2.83)	5.172 (2.92)	0.302 (2.248)	1.239 (2.119)	1.078 (2.578)	6.787 (3.455)	7.414 (2.216)	7.503 (1.901)	-1.516 (0.264)	-1.639 (0.406)	-2.046 (0.334)
CXCL9	-1.265	1.789 (1.71)	1.737 (1.93)	1.174 (1.659)	0.362 (2.663)	0.532 (2.53)	0.224 (3.444)	7.776 (1.3)	7.931 (1.394)	7.845 (1.212)	-1.382 (0.345)	-1.54 (0.084)	-1.193 (0.644)
CXCL10	0.661	3.692 (1.888)	4.1 (1.756)	3.249 (1.832)	2.018 (3.155)	2.163 (2.741)	1.964 (3.66)	7.558 (3.013)	8.384 (1.302)	8.431 (1.136)	-0.089 (0.589)	-0.108 (0.383)	0.001 (0.408)
CXCL11	-1.513	-0.469 (1.419)	-0.766 (1.039)	-1.106 (0.98)	-1.469 (0.846)	-1.511 (1.06)	-1.206 (1.814)	1.503 (1.689)	1.683 (1.298)	1.541 (1.189)	-2.078 (0.138)	-2.078 (0.178)	-2.183 (0.18)
Cytokines													
CSF-1	-1.929	3.46 (0.577)	2.942 (0.813)	2.466 (0.666)	0.475 (1.067)	0.019 (1.269)	0.18 (2.008)	5.087 (0.324)	4.774 (0.786)	4.709 (0.606)	-0.515 (0.578)	-0.776 (0.751)	-1.004 (0.507)
IFN- γ	0.643	-0.656 (1.427)	-0.502 (1.92)	-0.592 (1.7)	-1.362 (0.572)	-1.349 (0.758)	-1.059 (1.782)	4.499 (3.211)	4.578 (2.632)	3.033 (2.981)	-1.638 (0.528)	-1.185 (0.17)	-1.644 (0.551)
OSM	-1.308	4.406 (2.023)	3.392 (2.525)	3.095 (2.501)	0.136 (1.572)	0.575 (1.352)	0.434 (1.776)	6.915 (1.959)	6.788 (2.6)	6.822 (2.318)	-1.564 (0.341)	-1.762 (0.209)	-1.823 (0.343)
TNF	-0.808	1.662 (1.255)	0.903 (1.119)	0.846 (1.073)	-0.221 (1.017)	-0.284 (1.261)	-0.119 (1.713)	3.719 (2.134)	3.154 (1.405)	3.292 (1.114)	-1.111 (0.228)	-1.037 (0.252)	-0.974 (0.204)
TNF-beta	-0.793	-0.941 (0.781)	-1.134 (0.73)	-0.484 (1)	-1.349 (0.691)	-0.841 (0.322)	-1.065 (0.298)	-0.298 (0.64)	-0.297 (0.442)	-0.386 (0.378)	-1.477 (0.495)	-1.324 (0.332)	-1.443 (0.358)
TNFRSF9	-1.931	1.703 (1.707)	1.506 (2.258)	1.149 (2.138)	-0.102 (1.12)	-0.341 (1.043)	-0.179 (1.573)	3.188 (0.395)	2.887 (0.997)	2.853 (0.838)	-1.79 (0.275)	-1.755 (0.258)	-2.057 (0.284)
TNFSF14	-2.323	-0.058 (1.124)	-0.207 (1.96)	-0.484 (1.826)	-2.142 (0.415)	-2.132 (0.4)	-2.038 (0.679)	2.262 (2.287)	2.456 (2.436)	2.412 (2.356)	-2.725 (0.111)	-2.609 (0.227)	-2.475 (0.24)
TRAIL													
(TNFSF10)	-0.4	2.631 (1.48)	2.247 (1.89)	2.142 (1.956)	-0.103 (0.87)	0.038 (0.663)	0.102 (0.965)	4.263 (1.151)	4.285 (1.47)	4.218 (1.5)	-0.714 (0.533)	-0.299 (0.702)	-0.738 (0.353)
TRANCE													
(TNFSF11)	-0.317	2.13 (2.198)	1.351 (1.355)	1.116 (1.398)	-0.329 (0.515)	-0.774 (0.269)	-0.677 (0.496)	0.501 (0.577)	0.57 (0.746)	0.604 (0.421)	-0.85 (0.285)	-0.762 (0.411)	-0.737 (0.326)

TSLP	-1.531	-1.214 (0.87)	-1.561 (0.406)	-1.686 (0.361)	-2.292 (0.339)	-2.493 (0.754)	-1.931 (0.68)	0.061 (1.378)	0.012 (1.18)	-0.347 (1.42)	-3.061 (0.757)	-2.67 (0.114)	-2.272 (0.339)
TWEAK	-2.128	0.869 (1.176)	0.477 (1.569)	0.177 (1.576)	-1.427 (1.141)	-1.56 (0.966)	-1.34 (1.879)	3.041 (0.884)	3.062 (0.997)	2.925 (0.939)	-0.928 (0.398)	-1.388 (0.771)	-1.416 (0.485)
(TNFSF12)													
Miscellaneous													
4E-BP1	-0.365	3.163 (2.628)	3.336 (2.741)	3.528 (2.401)	0.116 (1.2)	0.239 (1.09)	0.494 (1.498)	6.742 (1.103)	6.854 (1.23)	6.95 (1.094)	-0.515 (0.115)	-0.691 (0.163)	-0.683 (0.187)
ADA	-1.055	4.137 (1.269)	3.655 (1.274)	3.691 (0.912)	2.312 (1.06)	1.65 (1.393)	2.436 (1.657)	6.691 (1.183)	6.764 (1.162)	6.819 (1.065)	5.109 (2.468)	4.167 (2.625)	4.98 (0.399)
ARTN	-0.817	-0.466 (2.141)	-1.515 (0.523)	-0.613 (1.459)	-1.135 (0.196)	-1.148 (0.185)	-1.396 (0.35)	-1.14 (0.244)	-1.188 (0.186)	-1.153 (0.375)	-1.447 (0.134)	-1.146 (0.281)	-1.272 (0.249)
AXIN1	-1.36	-1.025 (0.82)	-0.944 (0.857)	-0.512 (1.367)	-1.758 (0.234)	-1.818 (0.387)	-1.798 (0.555)	0.347 (1.229)	0.438 (1.09)	0.424 (1.11)	-1.952 (0.132)	-2.047 (0.312)	-2.072 (0.329)
Beta-NGF	1.187	0.396 (0.604)	0.636 (0.266)	0.665 (0.207)	0.827 (0.135)	0.69 (0.203)	0.709 (0.24)	0.563 (0.184)	0.547 (0.093)	0.541 (0.136)	0.795 (0.037)	0.746 (0.111)	0.794 (0.095)
CASP-8	-1.594	1.846 (1.343)	1.219 (1.545)	1.537 (1.186)	-0.823 (1.298)	-1.064 (0.446)	-1.062 (0.876)	3.884 (1.65)	3.725 (1.242)	3.7 (1.13)	-1.498 (0.235)	-1.955 (0.29)	-1.757 (0.293)
CD5	-0.763	1.545 (1.395)	1.748 (1.752)	1.633 (1.754)	-0.33 (1.006)	0.001 (0.954)	0.001 (1.087)	0.716 (0.635)	0.817 (0.541)	0.865 (0.311)	-1.129 (0.156)	-1.186 (0.15)	-1.123 (0.194)
CD6	-1.51	0.084 (2.252)	-0.622 (1.295)	-0.325 (1.245)	-1.106 (0.576)	-1.2 (0.449)	-1.194 (0.542)	-0.774 (0.405)	-0.74 (0.471)	-0.74 (0.505)	-1.62 (0.324)	-1.727 (0.49)	-1.727 (0.606)
CD8A	-1.949	-1.839 (0.426)	-2.17 (0.272)	-1.616 (0.739)	-2.039 (0.37)	-2.005 (0.362)	-2.132 (0.293)	-2.115 (0.282)	-2.036 (0.238)	-2.207 (0.293)	-2.259 (0.165)	-2.014 (0.366)	-2.152 (0.204)
CD40	-1.232	8.704 (1.061)	8.201 (1.469)	8.171 (1.142)	4.788 (2.131)	4.59 (2.532)	4.246 (3.347)	8.269 (0.559)	8.288 (1.276)	8.28 (1.036)	2.423 (1.094)	1.746 (0.973)	1.688 (1.25)
CD244	-0.059	-0.458 (0.357)	-0.551 (0.611)	-0.174 (0.692)	-0.916 (0.608)	-0.962 (0.328)	-0.802 (0.276)	-0.711 (0.221)	-0.687 (0.333)	-0.701 (0.303)	-0.979 (0.341)	-0.883 (0.313)	-0.896 (0.175)
CDCP1	-1.212	4.466 (1.689)	4.259 (1.774)	3.88 (1.472)	1.597 (1.154)	1.357 (1.377)	1.305 (1.964)	7.064 (0.582)	6.93 (1.21)	6.863 (1.035)	0.596 (0.798)	0.148 (0.877)	0.617 (0.988)
CST5	-0.483	4.889 (1.46)	4.241 (1.552)	3.643 (2.211)	3.397 (2.177)	4.101 (2.306)	3.135 (2.164)	3.403 (1.691)	3.595 (1.457)	3.019 (1.329)	1.777 (1.361)	1.011 (1.253)	-0.206 (0.472)
DNER	-2.132	2.922 (1.379)	2.187 (1.058)	1.157 (0.822)	1.013 (1.033)	1.017 (1.247)	0.533 (1.413)	1.742 (0.954)	1.594 (0.802)	1.346 (0.844)	1.751 (0.702)	1.757 (0.714)	-0.06 (0.657)
S100A12	-1.88	4.456 (1.068)	3.54 (1.244)	3.162 (1.298)	0.985 (1.815)	1.471 (1.443)	1.355 (1.688)	5.429 (0.892)	5.084 (0.98)	5.002 (1.044)	-1.6 (0.462)	-1.731 (0.643)	-2.017 (0.338)
FGF-5	-2.16	-1.997 (1.22)	-2.595 (0.251)	-1.947 (1.789)	-2.391 (0.292)	-2.431 (0.12)	-2.577 (0.115)	-2.546 (0.212)	-2.602 (0.166)	-2.723 (0.237)	-2.66 (0.174)	-2.572 (0.152)	-2.531 (0.188)
FGF-19	-1.831	-1.676 (0.876)	-1.403 (0.902)	-1.575 (1.082)	-2.034 (0.448)	-2.025 (0.277)	-2.195 (0.348)	-1.677 (0.681)	-1.505 (0.666)	-1.546 (0.556)	-2.378 (0.277)	-2.099 (0.189)	-2.209 (0.164)
FGF-21	-1.175	-1.084 (0.479)	-1.505 (0.37)	-1.37 (0.268)	-1.467 (0.283)	-1.423 (0.335)	-1.483 (0.242)	-1.542 (0.29)	-1.615 (0.151)	-1.557 (0.215)	-1.544 (0.098)	-1.429 (0.185)	-1.432 (0.205)
FGF-23	-0.888	-0.398 (1.985)	-1.239 (0.128)	-1.26 (0.204)	-1.146 (0.35)	-1.198 (0.338)	-1.309 (0.359)	-1.23 (0.268)	-1.236 (0.291)	-1.21 (0.282)	-1.232 (0.132)	-1.347 (0.392)	-1.289 (0.291)
Flt3L	-0.502	0.489 (1.468)	0.529 (1.232)	0.599 (2.529)	-0.708 (0.909)	-0.882 (0.747)	-0.553 (1.397)	2.254 (1.282)	2.219 (1.132)	2.116 (1.178)	-0.429 (0.708)	-1.088 (1.072)	-0.843 (0.35)
GDNF	-0.437	-0.535 (0.43)	-0.88 (0.187)	-0.585 (0.651)	-0.888 (0.462)	-0.738 (0.35)	-0.952 (0.477)	-1.051 (0.363)	-0.795 (0.436)	-0.991 (0.38)	-0.858 (0.231)	-0.569 (0.344)	-0.922 (0.293)
HGF	-1.748	2.282 (1.04)	1.676 (1.461)	1.31 (1.482)	-0.242 (0.598)	-0.784 (0.78)	-0.488 (1.207)	4.809 (1.36)	4.652 (1.694)	4.544 (1.793)	-0.661 (0.434)	-0.849 (0.868)	-0.959 (0.54)
LAP TGF-beta-1	-0.92	2.071 (0.968)	1.628 (1.087)	1.087 (0.814)	-0.439 (0.85)	-0.561 (0.736)	-0.436 (1.063)	3.436 (0.67)	3.48 (0.684)	3.485 (0.719)	-1.02 (0.37)	-0.932 (0.504)	-1.016 (0.203)
LIF	-1.367	-0.344 (0.847)	-0.733 (0.504)	-1.01 (0.701)	-1.34 (0.413)	-1.328 (0.513)	-1.266 (1.16)	0.199 (0.942)	0.023 (0.554)	-0.094 (0.69)	-0.858 (0.313)	-0.987 (0.464)	-1.447 (0.243)
LIF-R	-1.045	-0.529 (1.176)	-1.254 (0.778)	-0.791 (1.238)	-1.484 (0.22)	-1.519 (0.257)	-1.467 (0.384)	-1.462 (0.365)	-1.467 (0.348)	-1.456 (0.255)	-1.156 (0.256)	-1.125 (0.348)	-1.417 (0.238)
MMP-1	-0.955	4.04 (2.794)	5.052 (3.902)	4.443 (3.622)	0.658 (2.081)	0.928 (1.793)	1.03 (2.534)	8.179 (2.953)	9.124 (2.573)	8.859 (2.15)	-1.242 (0.323)	-1.277 (0.237)	-0.437 (2.439)

MMP-10	-0.209	3.333 (2.617)	3.291 (2.489)	2.773 (2.51)	0.382 (1.164)	0.506 (1.16)	0.727 (1.813)	4.207 (1.83)	4.258 (2.397)	3.687 (2.076)	-0.431 (0.243)	-0.579 (0.312)	-0.36 (0.915)
NRTN	-1.825	-2.074 (0.279)	-2.171 (0.328)	-1.759 (1.053)	-2.048 (0.288)	-2.175 (0.326)	-2.259 (0.418)	-2.28 (0.329)	-2.164 (0.326)	-2.227 (0.307)	-2.183 (0.197)	-2.224 (0.17)	-2.169 (0.336)
NT-3 OPG	-0.843	-1.137 (0.237)	-1.361 (0.313)	-1.235 (0.281)	-1.332 (0.279)	-1.335 (0.217)	-1.241 (0.39)	-1.188 (0.274)	-1.348 (0.301)	-1.278 (0.255)	-1.319 (0.149)	-1.39 (0.321)	-1.473 (0.264)
(TNFRSF11B)	-1.37	1.714 (1.695)	1.419 (1.957)	1.287 (1.8)	-0.601 (1.23)	-0.562 (0.958)	-0.551 (1.378)	2.63 (0.962)	2.31 (1.465)	2.211 (1.143)	-1.207 (1.166)	-1.636 (0.565)	-1.521 (0.501)
PD-L1 (CD274)	-0.416	1.36 (2.264)	0.512 (1.408)	0.597 (1.269)	-1.318 (0.811)	-0.831 (0.486)	-1.193 (0.825)	3.135 (0.519)	2.892 (1.444)	2.816 (1.317)	-1.374 (0.342)	-1.985 (0.831)	-1.359 (0.455)
SCF (KITLG)	-1.569	-0.805 (1.994)	-1.414 (0.883)	-0.875 (1.944)	-1.893 (0.522)	-1.939 (0.419)	-1.962 (0.391)	-1.707 (0.353)	-1.699 (0.143)	-1.595 (0.178)	-1.993 (0.202)	-2.161 (0.301)	-2.002 (0.037)
SIRT2	-2.114	-0.027 (1.976)	0.005 (2.028)	-0.287 (1.85)	-2.365 (0.445)	-2.561 (0.374)	-2.706 (0.82)	3.618 (1.181)	3.504 (1.237)	3.623 (1.146)	-2.94 (0.186)	-2.93 (0.646)	-3.004 (0.166)
SLAMF1 ST1A1	-0.928	-0.435 (3.571)	-2.03 (0.486)	-1.71 (0.363)	-1.906 (0.285)	-1.744 (0.51)	-2.135 (0.698)	-2.011 (0.279)	-1.846 (0.367)	-1.82 (0.372)	-1.858 (0.574)	-1.943 (0.615)	-1.918 (0.607)
(SULT1A1)	-1.556	-1.318 (0.597)	-1.679 (0.642)	-1.626 (0.781)	-2.175 (0.458)	-2.296 (0.376)	-2.076 (0.318)	-0.999 (0.944)	-0.864 (0.953)	-0.949 (1.002)	-2.292 (0.204)	-2.277 (0.255)	-2.246 (0.213)
STAMBP	-1.332	1.968 (1.487)	1.851 (1.589)	1.506 (1.256)	-0.568 (1.247)	-1.073 (0.742)	-0.999 (0.976)	5.242 (1.216)	4.731 (1.296)	4.856 (1.223)	-1.012 (0.84)	-1.24 (1.044)	-1.345 (0.45)
TGF-alpha	0.008	1.265 (1.059)	1.882 (2.176)	1.981 (2.224)	-0.039 (0.518)	0.014 (0.332)	-0.074 (0.52)	4.719 (1.018)	4.659 (2.128)	4.56 (1.887)	-0.353 (0.152)	-0.339 (0.195)	-0.381 (0.339)
uPA (PLAU)	-1.669	6.208 (1.628)	5.907 (1.892)	5.533 (1.761)	1.373 (2.319)	1.914 (2.198)	2.036 (2.971)	6.927 (1.461)	7.227 (1.465)	7.265 (1.155)	2.421 (1.128)	2.366 (1.509)	3.052 (0.818)
VEGFA	-0.253	9.007 (1.194)	8.461 (1.277)	7.641 (1.239)	6.768 (1.865)	6.29 (2.062)	6.19 (2.732)	12.883 (0.465)	12.62 (1.142)	12.565 (0.965)	4.912 (0.851)	4.685 (0.839)	3.835 (0.939)

AD: Atopic dermatitis; CD: Contact dermatitis; HC: Healthy controls; LOD: Limit of detection; NPX: Normalized Protein eXpression; PSO: Psoriasis.

Table SVII. Comparison between different numbers and depths of pooled tape strips for all assays. Benjamini-Hochberg adjusted p-values from Wilcoxon matched-pairs signed rank test comparing NPX values from different sets of tape strips (pooled as 1 to 8, 1 to 4, or 5 to 8) obtained from patients of each disease group.

Assay	AD			CD			PSO			HC		
	1-4	5-8	1-4	1-4	5-8	1-4	1-4	5-8	1-4	1-4	5-8	1-4
	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.	vs.
	1-8	1-8	5-8	1-8	1-8	5-8	1-8	1-8	5-8	1-8	1-8	5-8
Interleukins												
IL-1 alpha	0.33	0.09	0.09	0.31	0.45	0.94	0.31	0.23	0.33	0.42	0.23	0.48
IL-2	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
IL-2RB	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-4	1.00	0.66	0.66	1.00	0.94	1.00	0.66	0.92	0.66	1.00	1.00	1.00
IL-5	0.89	0.89	0.89	0.89	0.56	0.89	0.89	0.89	0.89	0.89	1.00	0.89
IL-6	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-7	1.00	1.00	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-8	0.94	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-10	0.89	0.89	0.89	0.89	0.89	0.89	0.19	0.95	0.47	0.89	0.89	0.89
IL-10RA	1.00	1.00	1.00	1.00	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-10RB	0.70	1.00	1.00	1.00	0.70	0.70	1.00	0.70	0.70	0.70	0.70	0.70
IL-12B	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-13	0.94	0.94	0.47	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.47	0.94
IL-15RA	0.19	0.19	0.81	0.25	0.33	0.81	0.33	0.33	0.25	0.52	0.25	0.25
IL-17A	0.95	0.92	0.92	0.92	0.75	0.89	0.95	0.92	0.92	0.75	0.75	0.95
IL-17C	0.63	0.66	0.94	0.94	1.00	0.63	0.94	1.00	0.63	0.94	1.00	1.00
IL-18	1.00	1.00	0.80	0.78	0.80	1.00	0.78	0.78	1.00	0.80	0.80	1.00
IL-18R1	0.09	0.09	0.75	0.87	1.00	0.75	0.92	0.92	0.92	0.75	0.75	0.75
IL-20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	1.00	1.00	1.00
IL-20RA	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
IL-22RA1	0.31	0.19	0.31	1.00	0.59	0.59	1.00	1.00	1.00	0.75	1.00	0.56
IL-24	0.80	1.00	0.23	0.23	0.89	0.23	0.89	0.85	0.80	0.23	0.85	0.75
IL-33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Chemokines												
CCL2 (MCP-1)	0.44	0.44	0.44	0.95	0.95	0.95	0.95	0.95	0.95	0.75	0.88	0.56
CCL3	0.09	0.09	0.94	1.00	1.00	1.00	1.00	1.00	1.00	0.94	1.00	1.00
CCL4	0.19	0.19	0.71	0.87	0.66	0.75	0.99	1.00	1.00	0.25	0.75	1.00
CCL7 (MCP-3)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CCL8 (MCP-2)	0.83	0.83	0.83	1.00	0.83	0.83	0.83	1.00	0.83	0.83	0.83	0.83
CCL11	0.75	0.84	0.75	0.75	0.77	0.75	0.84	0.84	0.77	0.75	0.75	0.75
CCL13 (MCP-4)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CCL19	0.75	0.75	0.70	0.70	0.63	1.00	0.63	0.63	0.70	0.70	0.70	0.75
CCL20	0.57	1.00	0.57	1.00	0.57	0.57	1.00	0.57	0.57	0.83	0.57	0.57
CCL23	0.19	0.94	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CCL25	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00
CCL28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

CX3CL1	0.66	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.50	1.00	0.50
CXCL1	0.77	0.62	0.62	0.62	0.77	0.62	0.77	1.00	1.00	1.00	0.62	0.62
CXCL5	0.89	0.89	1.00	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
CXCL6	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.74	0.70	0.38	0.38
CXCL9	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
CXCL10	1.00	0.19	0.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CXCL11	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Cytokines												
CSF-1	0.09	0.09	0.26	0.31	0.69	1.00	0.54	0.19	0.81	0.58	0.19	0.58
IFN- γ	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.75	0.75	0.95	0.75
OSM	0.19	0.19	0.75	0.75	0.75	0.75	1.00	0.75	0.75	0.89	0.75	0.75
TNF	0.47	0.19	1.00	0.98	0.98	0.94	0.75	0.75	0.98	0.98	0.75	1.00
TNF-beta	0.66	0.75	0.66	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
TNFRSF9	0.44	0.19	0.44	0.80	0.92	0.87	0.95	0.77	0.92	0.92	0.45	0.45
TNFSF14	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
TRAIL												
(TNFSF10)	0.88	0.89	0.94	0.94	0.94	0.94	0.92	0.94	0.94	0.88	0.94	0.88
TRANCE												
(TNFSF11)	0.28	0.19	0.92	0.88	0.89	0.92	0.92	0.92	0.95	0.92	0.92	0.92
TSLP	0.47	0.47	0.50	0.75	0.47	0.47	0.95	0.55	0.47	0.47	0.47	0.47
TWEAK												
(TNFSF12)	0.28	0.28	0.89	0.99	1.00	1.00	0.99	0.99	0.99	0.99	0.75	1.00
Miscellaneous												
4E-BP1	0.99	0.99	0.99	0.99	1.00	0.99	1.00	1.00	1.00	0.75	0.75	1.00
ADA	0.66	0.66	0.83	0.66	0.83	0.66	0.83	0.92	0.83	0.83	0.83	1.00
ARTN	0.47	0.84	0.47	0.80	0.47	0.47	0.84	0.84	0.84	0.62	0.62	0.84
AXIN1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Beta-NGF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CASP-8	0.19	0.38	0.25	0.95	0.77	0.95	0.47	0.43	0.95	0.25	0.38	0.38
CD5	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CD6	0.38	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
CD8A	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.84	0.83	0.83	0.84	0.83
CD40	0.75	0.75	1.00	0.87	0.92	0.87	0.75	0.77	1.00	0.75	0.75	1.00
CD244	0.92	0.92	0.92	0.92	0.92	0.92	0.92	1.00	1.00	0.92	0.92	1.00
CDCP1	0.63	0.63	0.66	0.75	0.75	1.00	0.92	0.75	0.75	0.63	0.75	0.75
CST5	0.23	0.51	0.74	0.74	0.74	0.23	0.74	0.39	0.19	0.74	0.23	0.30
DNER	0.12	0.12	0.12	1.00	0.50	0.50	0.66	0.12	0.43	1.00	0.12	0.12
S100A12	0.63	0.19	0.47	0.94	0.92	0.92	0.92	0.75	0.92	0.92	0.92	0.92
FGF-5	0.59	0.89	0.89	0.94	0.47	0.19	0.89	0.56	0.59	0.89	0.56	0.89
FGF-19	0.69	0.69	0.69	0.94	0.69	0.69	0.69	0.69	0.92	0.69	0.69	0.69
FGF-21	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FGF-23	0.89	0.56	0.96	0.98	0.89	0.98	0.89	0.96	0.96	0.96	1.00	1.00
Flt3L	0.89	0.66	0.66	0.66	1.00	0.89	0.66	0.66	0.85	0.66	0.66	0.85
GDNF	0.75	0.84	0.75	0.84	0.84	0.84	0.84	0.84	0.75	0.75	0.84	0.75
HGF	0.64	0.63	0.64	0.63	0.64	0.64	1.00	1.00	1.00	0.94	0.63	1.00

LAP TGF-beta-1	0.19	0.28	0.63	0.89	0.89	0.89	0.89	0.89	0.95	0.89	0.89	0.89
LIF	0.25	0.63	0.64	0.81	0.81	0.81	0.81	0.63	0.81	0.63	0.25	0.25
LIF-R	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.75	0.75
MMP-1	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MMP-10	0.89	0.89	0.89	0.94	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
NRTN	1.00	0.83	0.83	0.83	0.83	0.83	0.83	1.00	0.83	0.83	1.00	0.83
NT-3	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	1.00	0.89	0.89	0.89
OPG												
(TNFRSF11B)	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PD-L1 (CD274)	0.31	0.31	0.80	0.71	1.00	0.80	1.00	1.00	0.82	0.31	1.00	0.56
SCF (KITLG)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
SIRT2	0.47	0.47	0.92	0.47	0.47	0.92	0.95	0.92	0.92	0.92	0.92	0.92
SLAMF1	0.94	1.00	0.38	0.94	0.99	0.75	0.75	0.75	1.00	1.00	1.00	1.00
ST1A1												
(SULT1A1)	0.94	0.94	1.00	1.00	1.00	0.94	1.00	1.00	0.94	1.00	1.00	1.00
STAMBP	0.28	0.19	0.56	0.50	0.50	0.63	0.50	0.54	0.63	0.58	0.50	0.81
TGF-alpha	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
uPA (PLAU)	0.47	0.47	0.66	0.89	0.89	0.89	0.79	0.79	0.95	0.89	0.50	0.79
VEGFA	0.09	0.09	0.30	0.45	0.50	0.94	0.81	0.43	0.66	0.38	0.30	0.30

AD: Atopic dermatitis; CD: Contact dermatitis; HC: Healthy controls; NPX: Normalized Protein eXpression; PSO: Psoriasis.

Table SVIII. Comparison of NPX values in disease groups versus healthy controls. Results of Kruskal-Wallis test comparing NPX levels of all assays in AD, CD and PSO patients with those in the healthy controls. Both unadjusted and Benjamini-Hochberg adjusted p-value are reported, along with the estimate (test statistic). The estimate denotes the difference in mean ranks, with a positive value indicating a higher mean rank within the disease group compared to the healthy controls.

Assay	AD vs. HC			CD vs. HC			PSO vs. HC		
	Estimate	p-value	Adjusted p-value	Estimate	p-value	Adjusted p-value	Estimate	p-value	Adjusted p-value
Interleukins									
IL-1 alpha	-2.545	0.011	0.034	-2.607	0.009	0.03	-3.127	0.002	0.01
IL-2	0.965	0.334	0.483	0.227	0.82	0.864	-0.177	0.86	0.895
IL-2RB	1.389	0.165	0.295	0.467	0.64	0.736	-0.475	0.635	0.736
IL-4	-0.406	0.685	0.772	-0.713	0.476	0.608	-0.934	0.35	0.499
IL-5	2.127	0.033	0.08	1.359	0.174	0.31	1.79	0.073	0.148
IL-6	2.92	0.003	0.017	1.322	0.186	0.321	3.646	0	0.003
IL-7	0.357	0.721	0.796	-0.105	0.917	0.934	0.37	0.711	0.789
IL-8	2.822	0.005	0.02	0.732	0.464	0.599	3.818	0	0.002
IL-10	0.111	0.912	0.932	-0.289	0.773	0.833	-1.481	0.139	0.257
IL-10RA	0.022	0.983	0.983	-0.249	0.804	0.856	-1.21	0.226	0.368
IL-10RB	1.721	0.085	0.167	-0.092	0.927	0.94	3.011	0.003	0.013
IL-12B	1.735	0.083	0.163	0.587	0.557	0.677	3.83	0	0.002
IL-13	2.016	0.044	0.095	2.016	0.044	0.095	0.702	0.483	0.614
IL-15RA	2.865	0.004	0.019	1.973	0.048	0.103	2.066	0.039	0.089
IL-17A	0.35	0.726	0.798	-0.234	0.815	0.862	3.028	0.002	0.013
IL-17C	2.662	0.008	0.027	0.848	0.396	0.539	4.155	0	0.001
IL-18	2.041	0.041	0.093	0.504	0.614	0.728	3.829	0	0.002
IL-18R1	2.287	0.022	0.058	0.412	0.68	0.772	3.691	0	0.003
IL-20	1.543	0.123	0.234	0.498	0.619	0.73	3.088	0.002	0.011
IL-20RA	0.596	0.551	0.676	-0.848	0.396	0.539	1.122	0.262	0.409
IL-22RA1	2.41	0.016	0.045	0.473	0.636	0.736	3.525	0	0.003
IL-24	-1.512	0.13	0.245	-1.451	0.147	0.27	-1.514	0.13	0.245
IL-33	2.533	0.011	0.035	0.719	0.472	0.606	2.448	0.014	0.041
Chemokines									
CCL2 (MCP-1)	2.834	0.005	0.02	0.406	0.685	0.772	2.757	0.006	0.023
CCL3	3.32	0.001	0.006	1.168	0.243	0.385	3.425	0.001	0.004
CCL4	3.289	0.001	0.006	1.076	0.282	0.432	3.536	0	0.003
CCL7 (MCP-3)	0.787	0.431	0.575	0.203	0.839	0.881	2.691	0.007	0.026
CCL8 (MCP-2)	2.275	0.023	0.059	0.861	0.389	0.535	3.149	0.002	0.009
CCL11	2.625	0.009	0.03	1.426	0.154	0.281	2.475	0.013	0.039
CCL13 (MCP-4)	2.582	0.01	0.032	-0.553	0.58	0.691	1.906	0.057	0.118
CCL19	2.754	0.006	0.023	1.34	0.18	0.317	1.392	0.164	0.295
CCL20	2.822	0.005	0.02	0.885	0.376	0.522	3.68	0	0.003
CCL23	2.908	0.004	0.017	0.602	0.547	0.674	3.409	0.001	0.005
CCL25	2.004	0.045	0.096	0.252	0.801	0.856	0.657	0.511	0.641
CCL28	2.57	0.01	0.032	1.094	0.274	0.422	3.271	0.001	0.006
CX3CL1	1.254	0.21	0.351	-0.467	0.64	0.736	0.337	0.736	0.803

CXCL1	2.717	0.007	0.024	0.781	0.435	0.577	3.718	0	0.002
CXCL5	2.299	0.021	0.057	0.762	0.446	0.583	2.768	0.006	0.022
CXCL6	2.637	0.008	0.029	0.455	0.649	0.743	3.486	0	0.004
CXCL9	1.82	0.069	0.14	0.898	0.369	0.515	3.972	0	0.002
CXCL10	2.087	0.037	0.086	1.212	0.225	0.368	3.583	0	0.003
CXCL11	2.25	0.024	0.061	0.928	0.353	0.5	3.558	0	0.003
Cytokines									
CSF-1	2.496	0.013	0.038	0.775	0.439	0.579	4.221	0	0.001
IFN- γ	0.947	0.344	0.494	0.609	0.543	0.672	3.376	0.001	0.005
OSM	2.785	0.005	0.022	0.91	0.363	0.508	3.989	0	0.002
TNF	2.674	0.007	0.027	1.26	0.208	0.349	3.923	0	0.002
TNF-beta	1.309	0.19	0.326	0.387	0.699	0.781	2.801	0.005	0.021
TNFRSF9	2.773	0.006	0.022	1.42	0.156	0.283	4.138	0	0.001
TNFSF14	3.018	0.003	0.013	1.174	0.24	0.383	4.138	0	0.001
TRAIL									
(TNFSF10)	2.613	0.009	0.03	0.645	0.519	0.645	3.785	0	0.002
TRANCE									
(TNFSF11)	3.879	0	0.002	1.174	0.24	0.383	2.619	0.009	0.03
TSLP	2.779	0.005	0.022	0.873	0.383	0.528	3.58	0	0.003
TWEAK									
(TNFSF12)	1.764	0.078	0.155	-0.387	0.699	0.781	3.387	0.001	0.005
Miscellaneous									
4E-BP1	2.25	0.024	0.061	0.59	0.555	0.677	3.862	0	0.002
ADA	-0.934	0.35	0.499	-2.256	0.024	0.061	1.227	0.22	0.363
ARTN	2.109	0.035	0.083	2.109	0.035	0.083	2.028	0.043	0.094
AXIN1	2.49	0.013	0.038	1.014	0.31	0.463	3.564	0	0.003
Beta-NGF	-2.348	0.019	0.052	0.264	0.792	0.85	-2.006	0.045	0.096
CASP-8	2.244	0.025	0.062	0.338	0.735	0.803	3.646	0	0.003
CD5	3.553	0	0.003	1.279	0.201	0.342	2.967	0.003	0.015
CD6	2.311	0.021	0.056	1.236	0.217	0.36	2.481	0.013	0.039
CD8A	1.85	0.064	0.131	1.051	0.293	0.445	0.823	0.41	0.555
CD40	3.535	0	0.003	1.107	0.268	0.416	3.287	0.001	0.006
CD244	2.152	0.031	0.076	0.676	0.499	0.632	1.188	0.235	0.379
CDCP1	2.514	0.012	0.037	0.793	0.428	0.573	4.039	0	0.002
CST5	2.84	0.005	0.02	1.334	0.182	0.318	1.619	0.105	0.202
DNER	1.66	0.097	0.187	-0.922	0.356	0.502	0.083	0.934	0.944
S100A12	3.166	0.002	0.009	1.322	0.186	0.321	4.171	0	0.001
FGF-5	1.881	0.06	0.123	1.881	0.06	0.123	0.796	0.426	0.573
FGF-19	1.967	0.049	0.104	1.352	0.176	0.312	2.238	0.025	0.062
FGF-21	2.041	0.041	0.093	0.473	0.636	0.736	0.127	0.899	0.922
FGF-23	0.996	0.319	0.474	0.166	0.868	0.897	-0.149	0.881	0.908
Flt3L	1.137	0.255	0.401	-0.031	0.975	0.979	2.735	0.006	0.024
GDNF	0.965	0.334	0.483	-0.449	0.654	0.745	-1.061	0.289	0.44
HGF	2.385	0.017	0.047	0.48	0.632	0.736	3.989	0	0.002
LAP TGF-beta-1	2.502	0.012	0.037	0.658	0.511	0.641	4.022	0	0.002
LIF	0.977	0.328	0.482	-1.266	0.205	0.348	2.05	0.04	0.092

LIF-R	0.971	0.331	0.483	-1.672	0.094	0.184	-1.757	0.079	0.157
MMP-1	2.588	0.01	0.031	1.021	0.307	0.461	3.917	0	0.002
MMP-10	2.92	0.003	0.017	0.738	0.461	0.597	3.425	0.001	0.004
NRTN	0.652	0.515	0.643	1.021	0.307	0.461	-0.309	0.757	0.819
NT-3	1.15	0.25	0.395	-0.172	0.863	0.896	0.762	0.446	0.583
OPG									
(TNFRSF11B)	2.238	0.025	0.062	0.24	0.811	0.86	3.293	0.001	0.006
PD-L1 (CD274)	2.398	0.017	0.046	0.184	0.854	0.892	3.646	0	0.003
SCF (KITLG)	2.102	0.036	0.083	0.566	0.572	0.686	1.481	0.139	0.257
SIRT2	2.637	0.008	0.029	1.223	0.221	0.363	4.287	0	0.001
SLAMF1	0.584	0.559	0.677	0.031	0.975	0.979	-0.552	0.581	0.691
ST1A1									
(SULT1A1)	2.723	0.006	0.024	0.572	0.568	0.684	2.856	0.004	0.019
STAMBP	2.029	0.042	0.094	0.369	0.712	0.789	3.812	0	0.002
TGF-alpha	2.318	0.02	0.055	0.75	0.453	0.59	4.105	0	0.001
uPA (PLAU)	2.422	0.015	0.044	-0.314	0.754	0.819	2.878	0.004	0.019
VEGFA	2.281	0.023	0.059	0.99	0.322	0.476	4.221	0	0.001

AD: Atopic dermatitis; CD: Contact dermatitis; HC: Healthy controls; NPX: Normalized Protein eXpression; PSO: Psoriasis.