Additional File 9. TF-encoding DEGs are more likely to interact with PRE motifs than TF-encoding non-DEGs. Our analysis identified 1149 TF-encoding genes expressed in human skin, including 39 PP-increased DEGs, 67 PP-decreased DEGs, and 1043 non-DEGs with similar expression in lesional and uninvolved skin. We evaluated whether TF-encoding DEGs are more likely to interact with PRE motifs than TF-encoding non-DEGs. The analysis was performed with respect to TF-encoding PP-increased DEGs ($n = 39$), PP-decreased DEGs ($n = 67$) and both PP-increased + PP-decreased DEGs ($n = 106$); additionally, analyses were performed with respect to PRE motifs enriched upstream of PP-increased DEGs ($n = 126$ PREs), PP-decreased DEGs ($n = 461$), and the combined set of all DEGs ($n = 462$). For each row of the table, the percentage of TF-encoding DEGs associated with a PRE motif was compared with that observed among TF-encoding non-DEGs (Fisher's Exact Test).

TF DEG Group	PRE Group	% PRE-Associated (DEGs)[1]	% PRE-Associated (non-DEGs)[2]	P-Value
Increased ($n = 39$)	Increased ($n = 126$)	8/39 (20.5%)	64/1110 (5.8%)	0.000417*
Decreased ($n = 67$)	Increased ($n = 126$)	4/67 (6%)	68/1082 (6.3%)	0.412
Both ($n = 106$)	Increased ($n = 126$)	12/106 (11.3%)	60/1043 (5.8%)	0.0112*
Increased ($n = 39$)	Decreased ($n = 461$)	5/39 (12.8%)	181/1110 (16.3%)	0.624
Decreased ($n = 67$)	Decreased ($n = 461$)	17/67 (25.4%)	169/1082 (15.6%)	0.0152*
Both ($n = 106$)	Decreased ($n = 461$)	22/106 (20.8%)	164/1043 (15.7%)	0.0731
Increased ($n = 39$)	Both ($n = 462$)	7/39 (17.9%)	178/1110 (16%)	0.283
Decreased ($n = 67$)	Both ($n = 462$)	11/67 (16.4%)	174/1082 (16.1%)	0.391
Both ($n = 106$)	Both ($n = 462$)	18/106 (17%)	167/1043 (16%)	0.338

[1]Fraction of TF-encoding DEGs interacting with PREs (FDR < 0.10).
[2]Fraction of TF-encoding non-DEGs interacting with PREs (FDR < 0.10).