#	Protein marker (gene)	Functional class	Undifferentiated (≤ 0.05 mM Ca^{2+})	Differentiated (2.0–2.8 mM Ca^{2+}, 120 h)	Trend	Key references (PMID#)
1	**KRT1** / KRT10	Early suprabasal keratins	very low	strongly expressed	↑	18637039 pubmed.ncbi.nlm.nih.gov [1]
2	IVL (Involucrin)	Cornified layers	low	high	↑	18637039 pubmed.ncbi.nlm.nih.gov [1]
3	LOR (Loricrin)	Late envelope protein	absent	robust	↑	2007780 https://pubmed.ncbi.nlm.nih.gov/2007780/ [2]
4	FLG (Filaggrin)	Filament-aggregating protein	absent	detectable/late	↑	2450098 https://pubmed.ncbi.nlm.nih.gov/2450098/ [3]
5	TGM1 (Transglutaminase-1)	Cross-linking enzyme	low	high	↑	16536800 https://pubmed.ncbi.nlm.nih.gov/16536800/ [4]
6	SPRR1A / SPRR2	Small proline-rich proteins	not detected	induced	↑	9733767 https://pubmed.ncbi.nlm.nih.gov/9733767/ [5]
7	DSG1 (Desmoglein-1)	Desmosomal cadherin	low	high	↑	9511724 https://pubmed.ncbi.nlm.nih.gov/9511724/ [6]
8	KRT14	Basal keratin	high	downregulated	↓	29391667 https://pubmed.ncbi.nlm.nih.gov/29391667/ [7]
9	**KRT5** Ki-67 (proliferation)	Basal keratin	high	Down regulated	↓	24116231 https://pubmed.ncbi.nlm.nih.gov/24116231/

#	Protein marker (gene)	Functional class	Undifferentiated (≤ 0.05 mM Ca^{2+})	Differentiated (2.0–2.8 mM Ca^{2+}, 120 h)	Trend	Key references (PMID#)
						[8]
10	ITGB1 (β-1 Integrin)	Basal adhesion receptor	high	reduced	↓	20723423 https://pubmed.ncbi.nlm.nih.gov/20723423/ [9]

Table S1. Previously studied calcium-induced marker expression in HaCaT cells. A consolidated marker panel comparing the basal-state ("undifferentiated") versus the calcium-driven, terminally differentiating state of HaCaT keratinocytes. Unless otherwise noted, "undifferentiated" refers to cultures maintained in ≤ 0.06 mM $CaCl_2$, whereas "differentiated" refers to 120 h exposure to ≥ 1.8–2.8 mM $CaCl_2$. Expression trends are qualitative (↑ = induced or high, ↓ = repressed or low, ↔ = largely unchanged). Values are arbitrary units normalized to undifferentiated = 1.0). KRT1 and KRT5 are bolded since they were the markers chosen in this study. **Note:** Absolute intensities differ by method (Western blot densitometry vs. immunofluorescence); the up or down expression here represents an arbitrary measure understood from the cited studies. PMID #= PubMed ID Number. Pubmed links included. All references are included in the main article as well.

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