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| **Basal Subtype** | |
| Epidermal Development | *GJB5, COL17A1, S100A2, FABP5* |
| KEGG *Erbb* Signaling Pathway | *TGFA, EGFR, MAPK1, MAP2K1* |
| Growth/Transcription Factors | *E2F4, TP63* |
| **Mesenchymal Subtype** | |
| Epithelial-to-Mesenchymal Transition | *ACTA1, VIM, DES* |
| KEGG Focal Adhesion Pathway | *PDGFRA/B, COL1A2, COL3A1, LAMB2* |
| Growth/Transcription Factors | *HGF, TWIST1* |
| **Atypical Subtype** | |
| HPV Positivity | *CDKN2A, RPA2, LIG1* |
| KEGG Fatty Acid Metabolism Pathway | *ALDH3A1, ALDH9A1* |
| Growth/Transcription Factors | *E2F2, FGFR3* |
| **Classical Subtype** | |
| Xenobiotic Metabolism | *AKR1C1, AKR1C3, GPX2* |
| Transcription Factors | *NFE2L2, SOX2* |
| Cell Proliferation | *PIK3CA* |