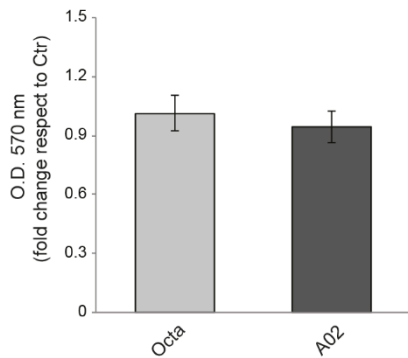


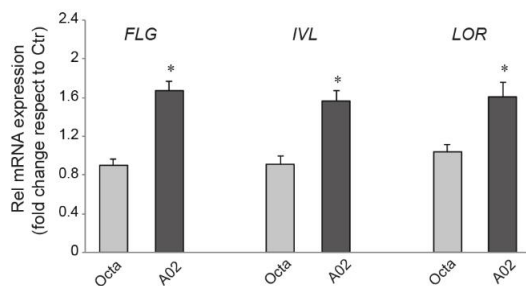
Figure S1 Effects of Octa and A02 on A431 cells viability.



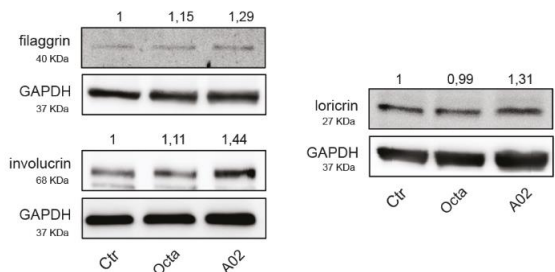
Cell viability evaluated by MTT assay on NHKs treated with Octa or A02 (90 μ M) for 72 h. The data in the graphs are mean \pm SD of three independent experiments.

Figure S2 Effects of A02 and Octa on the differentiation process in NHKs.

A



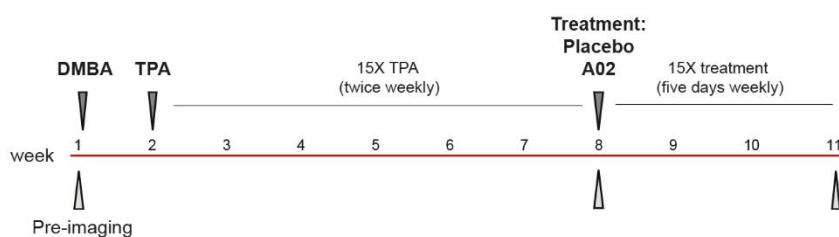
B



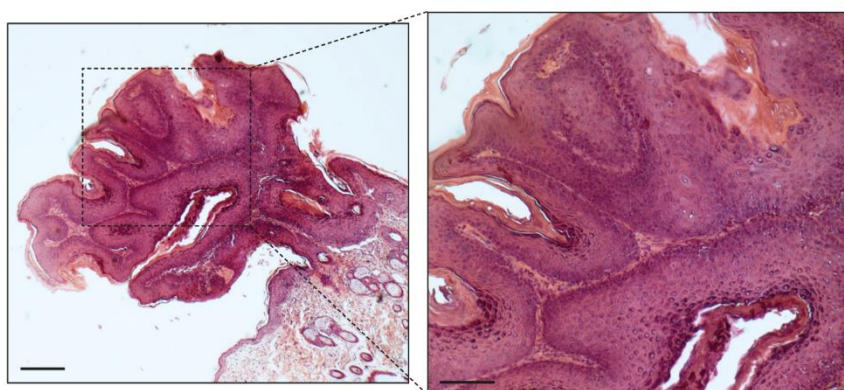
(A) Quantitative real-time PCR analysis of FLG, IVL, and LOR in NHKs incubated with Octa or A02 (90 μ M) for 48 h. All mRNA values were normalized against the expression of GAPDH and were expressed relative to untreated control cells. The data in the graphs are mean \pm SD of three independent experiments (* p <0.05 vs untreated control). (B) Western blot analysis of filaggrin, involucrin and loricrin protein expression in NHKs treated with A02 (90 μ M) for 72 h. Representative blots are shown. GAPDH was used as an endogenous loading control for western blot analysis. Densitometric scanning of band intensities was performed to quantify the change in protein expression. Data represent the mean \pm SD of three independent experiments and are expressed as fold change respect to untreated control cells (control value taken as 1-fold in each case).

Figure S3 Experimental design and histological analysis of DMBA-TPA-induced mouse skin papillomas.

A



B



(A) Schematic representation of the experimental design. (B) Representative images of Hematoxylin & Eosin stained sections from mouse skin after 1X DMBA and 15X TPA. Histological features of skin papillomas are represented by acanthotic epidermis, cytoarchitectural anomalies of basal and suprabasal epithelium, dermal fibroblast proliferation and inflammatory cell infiltrate. The boxed area represents the enlarged view of the selected frame. Bars: 200 μ m; 100 μ m.

Table S1. Human primers used for the Real time RT-PCR analysis.

| Gene | Oligonucleotide sequences (5'-3') | Amplicon size | Accession Number |
|---------------|--|---------------|------------------|
| Catalase | <i>For:</i> TTTCCCAGGAAGATCCTGAC <i>Rev:</i> ACCTTGGTGAGATCGAATGG | 148 bp | NM_001752.4 |
| E-Cadherin | <i>For:</i> GAACGCATTGCCACATACAC <i>Rev:</i> ATTCGGGCTTGTTGTCATTC | 118 bp | NM_004360.5 |
| Fibronectin | <i>For:</i> CCTCGAAGAGCAAGAGGCAG <i>Rev:</i> GCTTCAGGTTTACTCTCGCA | 202 bp | NM_001365522.2 |
| Filaggrin | <i>For:</i> GAAGACAAGGATCGCACCAG <i>Rev:</i> ATGGTGTCCTGACCCTCTTG | 76 bp | NM_002016.2 |
| GAPDH | <i>For:</i> TGCACCACCAACTGCTTAGC <i>Rev:</i> GGCATGGACTGTGGTTCATGAG | 198 bp | NM_001289746 |
| HO-1 | <i>For:</i> CCAGCGGGCCAGCAACAAAGTGC <i>Rev:</i> AGCCTTCAGTGCCACGGTAAGG | 265 bp | NM_002133.3 |
| Involucrin | <i>For:</i> ACCCATCAGGAGCAAATGAAA <i>Rev:</i> GCTCGACAGGCACCTTCTGGC | 67 bp | NM_005547.4 |
| Loricrin | <i>For:</i> TCATGATGCTACCCGAGGTTTG <i>Rev:</i> CAGAACTAGATGCAGCCGGAGA | 87 bp | NM_000427.3 |
| MMP2 | <i>For:</i> AGAAGGCTGTGTTCTTTGCAG <i>Rev:</i> AGGCTGGTCAGTGGCTTG | 88 bp | NM_004530.6 |
| N-Cadherin | <i>For:</i> GGACTATGATTACCTGAACGACTG <i>Rev:</i> AGTTAAAGCCTAGCTTCTGAATGC | 161 bp | NM_001792.5 |
| NQO1 | <i>For:</i> GGATTGGACCGAGCTGGAA <i>Rev:</i> ATTGCAGTGAAGATGAAGGCAAC | 140 bp | NM_000903.2 |
| PPAR γ | <i>For:</i> GCCAAGCTGCTCCAGAAAAT <i>Rev:</i> TGATCACCTGCAGTAGCTGCA | 73 bp | NM_138711 |
| SLUG | <i>For:</i> TGGTTGCTTCAAGGACACAT <i>Rev:</i> GCAAATGCTCTGTTGCAGTG | 77 bp | NM_003068.5 |
| Vimentin | <i>For:</i> TCTACGAGGAGGAGATGCGG <i>Rev:</i> GGTCAAGACGTGCCAGAGAC | 213 bp | NM_003380.5 |

Table S2. Mouse primers used for the Real time RT-PCR analysis.

| Gene | Oligonucleotide sequences (5'-3') | Amplicon size | Accession Number |
|---------------|--|---------------|------------------|
| E-Cadherin | <i>For:</i> AAGTGACCGATGATGATGCC <i>Rev:</i> CTTCAATTCACGTCTACCACGT | 258 bp | NM_009864.3 |
| Fibronectin | <i>For:</i> CGAGGTGACAGAGACCACAA <i>Rev:</i> CTGGAGTCAAGCCAGACACA | 149 bp | NM_010233.2 |
| GAPDH | <i>For:</i> TGCACCACCAACTGCTTAGC <i>Rev:</i> GGCATGGACTGTGGTCATGAG | 198 bp | NM_001289746 |
| MMP2 | <i>For:</i> AGAAGGCTGTGTTCTTTGCAG <i>Rev:</i> AGGCTGGTCAGTGGCTTG | 88 bp | NM_004530.6 |
| N-Cadherin | <i>For:</i> TGAAACGGCGGGATAAAGAG <i>Rev:</i> GGCTCCACAGTATCTGGTTG | 157 bp | NM_007664.5 |
| α -SMA | <i>For:</i> GAGGCACCACTGAACCCTAA <i>Rev:</i> CATCTCCAGAGTCCAGCACA | 154 bp | NM_007392.3 |
| SLUG | <i>For:</i> CATTGCCTTGTGTCTGCA <i>Rev:</i> AGAAAGGCTTTTCCCCAGTG | 96 bp | NM_011415.3 |
| Vimentin | <i>For:</i> TCTACGAGGAGGAGATGCGG <i>Rev:</i> GGTCAAGACGTGCCAGAGAC | 213 bp | NM_003380.5 |