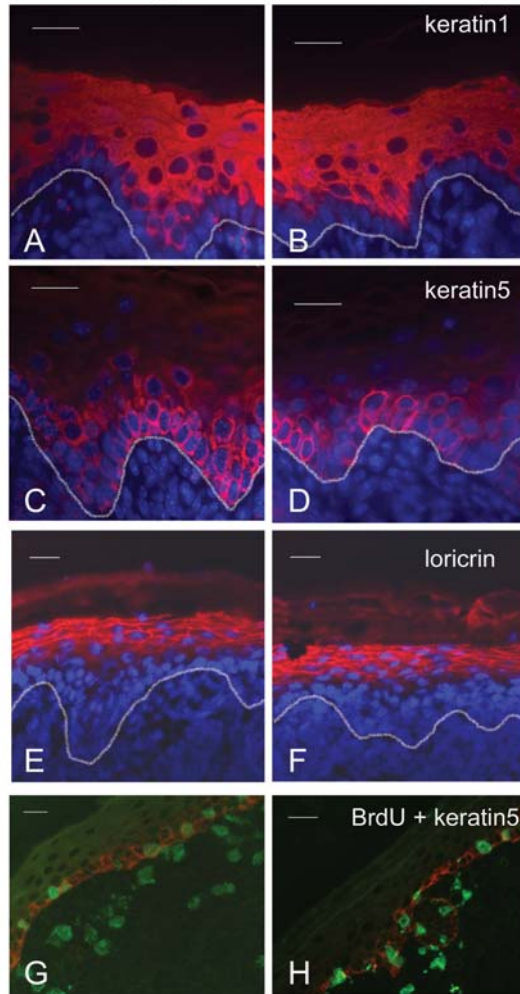


neonatal epidermis

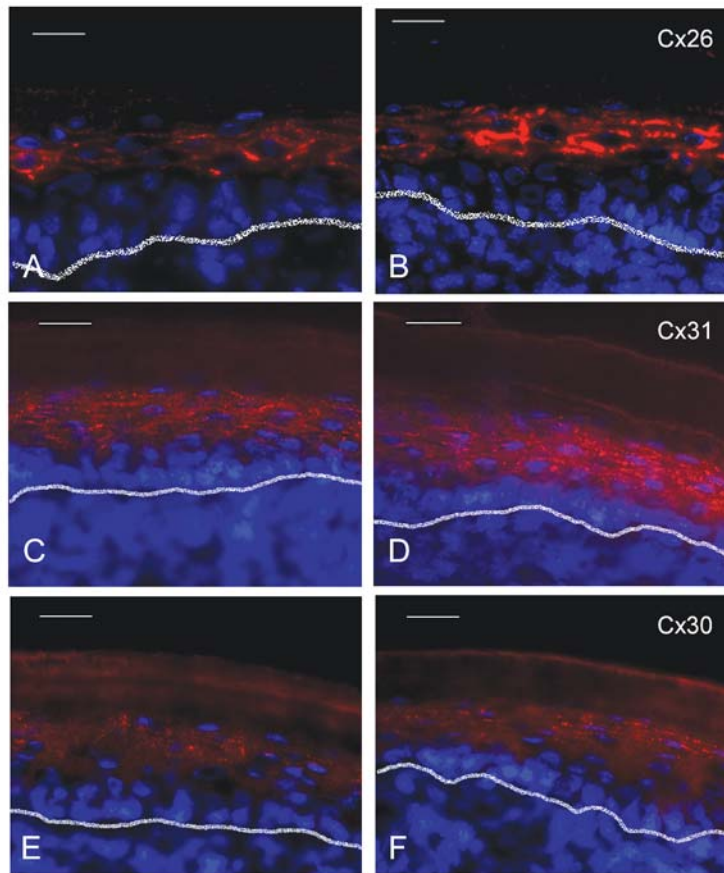
wild type

Cx43K258stop

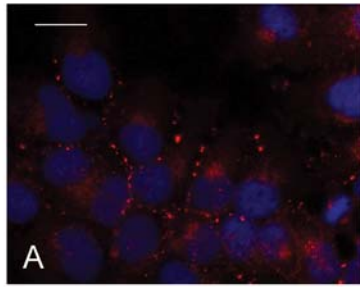


wild type epidermis

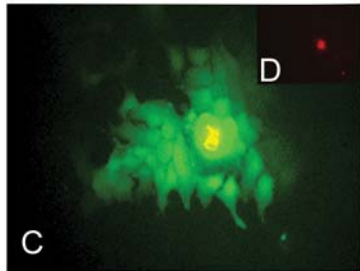
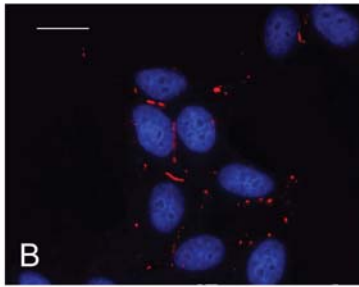
Cx43K258stop epidermis



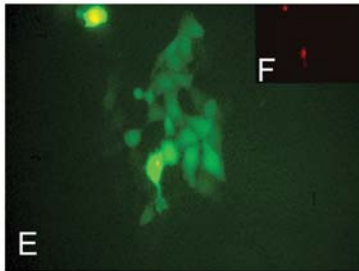
HeLa-Cx43



HeLa-Cx43K258stop



D



F

Supp. Figure 1: *Analysis of keratin and loricrin expression and proliferation in neonatal epidermis*

A-F: neonatal wild type (A, C, E, F) and homozygous Cx43K258stop (B, D, F, H) epidermal cryosections were immunolabelled and co-stained for nuclei to simplify recognition of the epidermis-dermis boundary, depicted as white line. No differences in the expression of keratin1 (A, B), keratin5 (C, D) or loricrin (E, F) were detected between genotypes. Bars = 20 μ m. **G-H:** neonatal wild type (G) and homozygous Cx43K258stop epidermis (H) were immunolabelled 2 h after BrdU-injection. No differences in proliferation, detected by BrdU-incorporation (green) were seen between genotypes, with one in 10 cells indicating proliferation.

By co-staining for keratin5 (red), restriction of proliferation to s. basale was confirmed. After a chase of 24 h (data not shown) there were no differences between genotypes, with signals in s. basale and s. spinosum, verifying unchanged transition time of keratinocytes. Bars = 20 μ m

Supp. Figure 2: *Analysis of epidermal connexin expression*

A-F: neonatal wild type (A, C, E) and homozygous Cx43K258stop (B, D, F) epidermal cryosections were immunolabelled and co-stained for nuclei to simplify recognition of the epidermis-dermis boundary, depicted as white line. As expected for diseased skin, Cx26 was elevated in Cx43K258stop epidermis (B). No differences in the expression of Cx31 (C, D), and Cx30 (E, F) were detected between genotypes. Bars = 20 μ m

Supp. Figure 3: *Analysis of HeLa transfectants*

A- B: immunolabelling of Cx43-HeLa (A) and Cx43K258stop-HeLa transfectants (B) co-stained for nuclei. Cx43K258stop is found in the plasma membrane as Cx43 but apparently forms larger gap junction plaques. Bars = 20 μ m. **C-F:** Cx43K258stop-HeLa transfectants showed similar degree of Calcein dye diffusion (E) as Cx43-HeLa transfectants (C). Donor-cells marked by DiI (D, F).