

Supplementary Information

Fully functional hair follicle regeneration through the rearrangement of stem cells and their niches

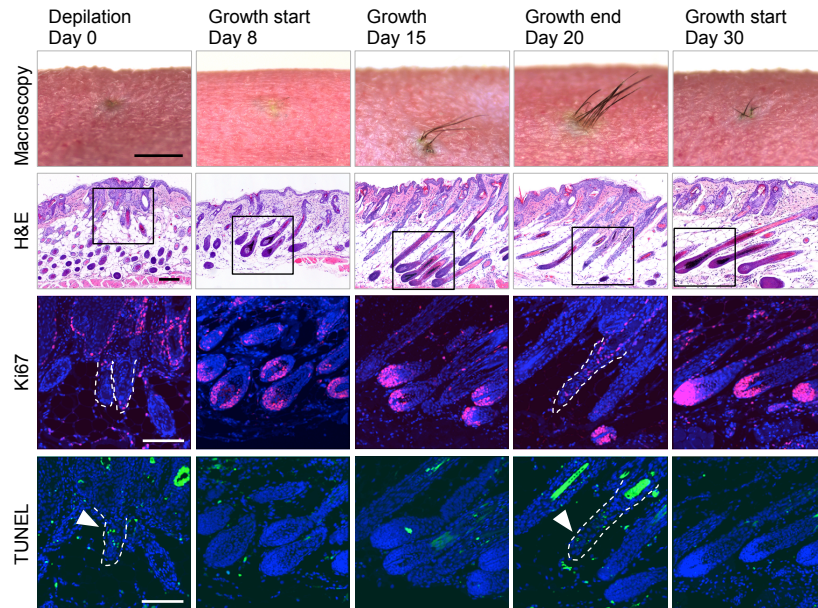
Koh-ei Toyoshima, Kyosuke Asakawa, Naoko Ishibashi, Hiroshi Toki, Miho Ogawa, Tomoko Hasegawa, Tarou Irié, Tetsuhiko Tachikawa, Akio Sato, Akira Takeda, and Takashi Tsuji

*To whom correspondence should be addressed. E-mail: t-tsuji@rs.noda.tus.ac.jp

This information includes:

Supplementary Figure S1.

Supplementary Table S1.



Supplementary Figure S1. Histological analysis of hair cycling in the bioengineered hair follicle. The macro-morphological and histological analyses of the bioengineered hair follicles in various phases of the hair cycles. To synchronise the hair cycles of the bioengineered hair follicles, the bioengineered hairs were depilated. The bioengineered hair follicles were sacrificed at 3 hours, 8 days, 15 days, 20 days and 30 days after depilation. These follicles were then fixed, serially sectioned, and analysed by H&E-staining and immunostaining using anti-Ki67 antibodies and TUNEL staining. Scale bar: 1.0 mm for macroscopy, 50 μ m for histological images.

Supplementary Table S1. The primer sequences used for preparation of RNA probes.

Probe name	Primer sequence	
Shh	sense	5'-GACAGCTCACAAAGTCCTCAG-3'
	antisense	5'-CAGTTCCTTATTTGCGAGTCGCTC-3'
Wnt10b	sense	5'-CTTTGACAGGTTCCAGGACGCAG-3'
	antisense	5'-GCATTTGCACTTCCGCTTCAG-3'
Msx2	sense	5'-TTTATGTATAAATATATAAT-3'
	antisense	5'-TCTGAAGTGACATCCTGTAT-3'
β-Catenin	sense	5'-TTTAGGCCTGTTTGTAATC-3'
	antisense	5'-CAAAACAAGGCTCAAATAAC-3'
Versican	sense	5'-AGTCATTCCATTAGCCACCG-3'
	antisense	5'-GTTGATGTTGAAATGGACTC-3'
Lef1	sense	5'-TCTGCAGCCCGGTGGCTCTT-3'
	antisense	5'-AATCTCCGCTCCGCTGCGGG-3'
Bmp4	sense	5'-CACGATTGTAATGCACAA-3'
	antisense	5'-TGCACAGCACAATTCACATT-3'
Notch1	sense	5'-TGACCACAGGCAGTGGACCCAGC-3'
	antisense	5'-AGGTCATCCACGGGATTGAGGTC-3'
Dct	sense	5'-GGGCTAGAACTAAACCCAAAGAA-3'
	antisense	5'-CCTCCACAATTATAACCAGCAAA-3'