

Supporting Information

Table S1 The mobile phase for PTCA assay and 4-AHP assay

A

Time(min)	A (methanol, %)	B (0.1 M potassium phosphate buffer, pH=2.1, %)
0	10	90
5	10	90
15	30	70
20	70	30

B

Time(min)	A (acetonitrile, %)	B (0.05 M potassium phosphate buffer (B, pH=4.0) containing 1‰ sodium octanesulphonate %)
0	1	99
10	1	99
20	5	95

The mobile phase for PTCA assay and 4-AHP assay were showed as A and B, respectively.

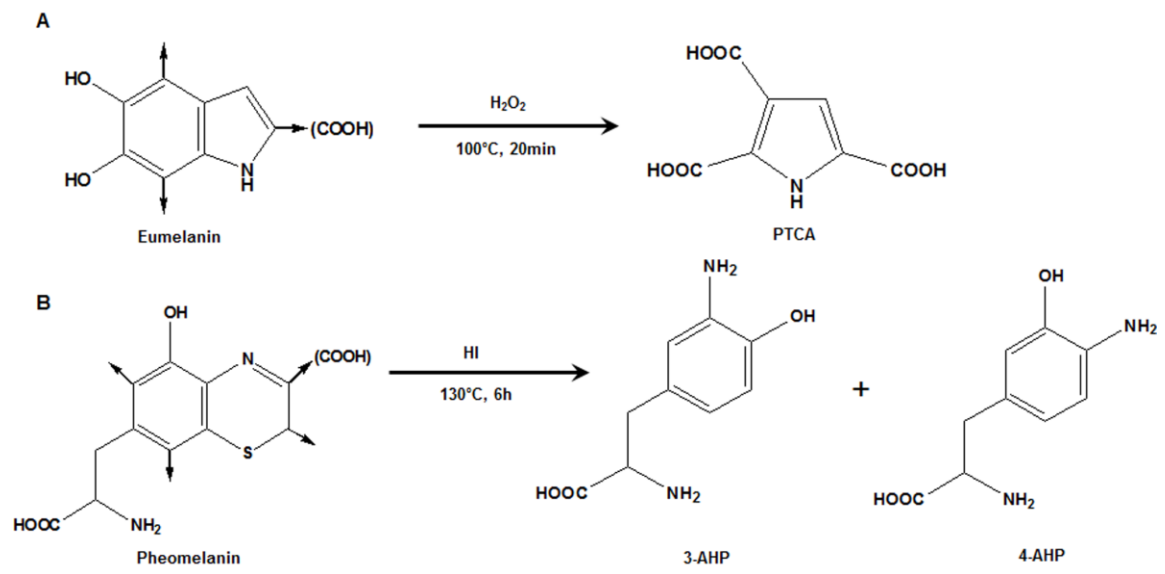


Figure S1. Chemical degradation of eumelanin and pheomelanin with H_2O_2 and HI.

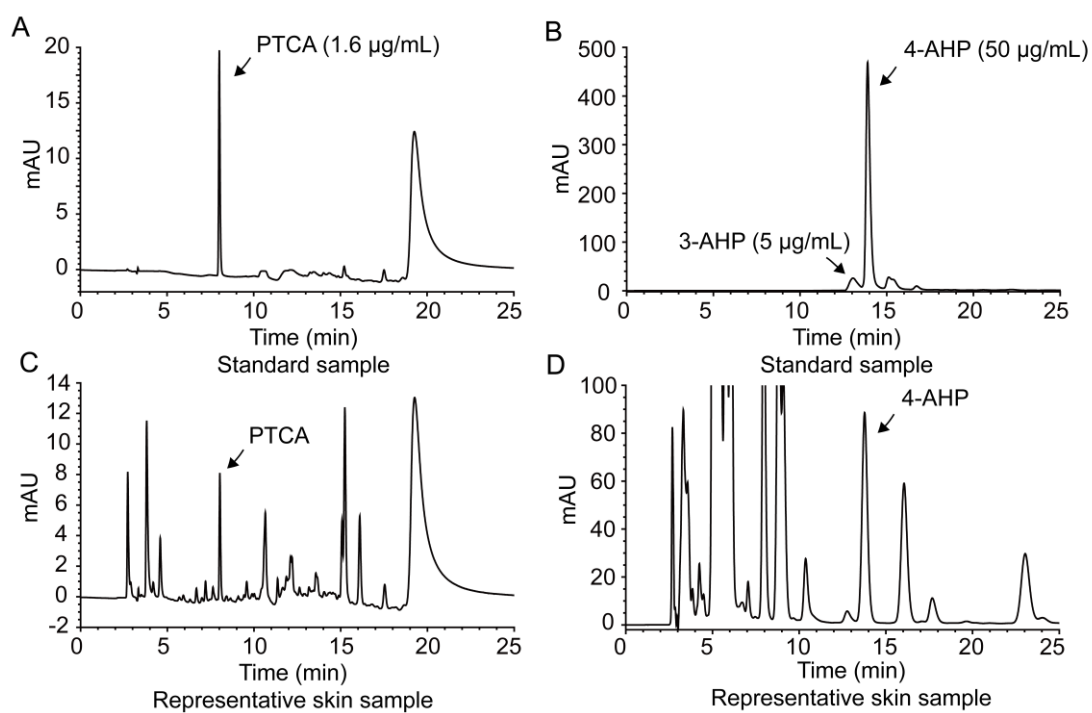


Figure S2. HPLC chromatograms of biological samples. (A) and (B), representative chromatograms of PTCA in standards and skin samples; (C) and (D), representative chromatograms of 4-AHP in standards and skin samples.

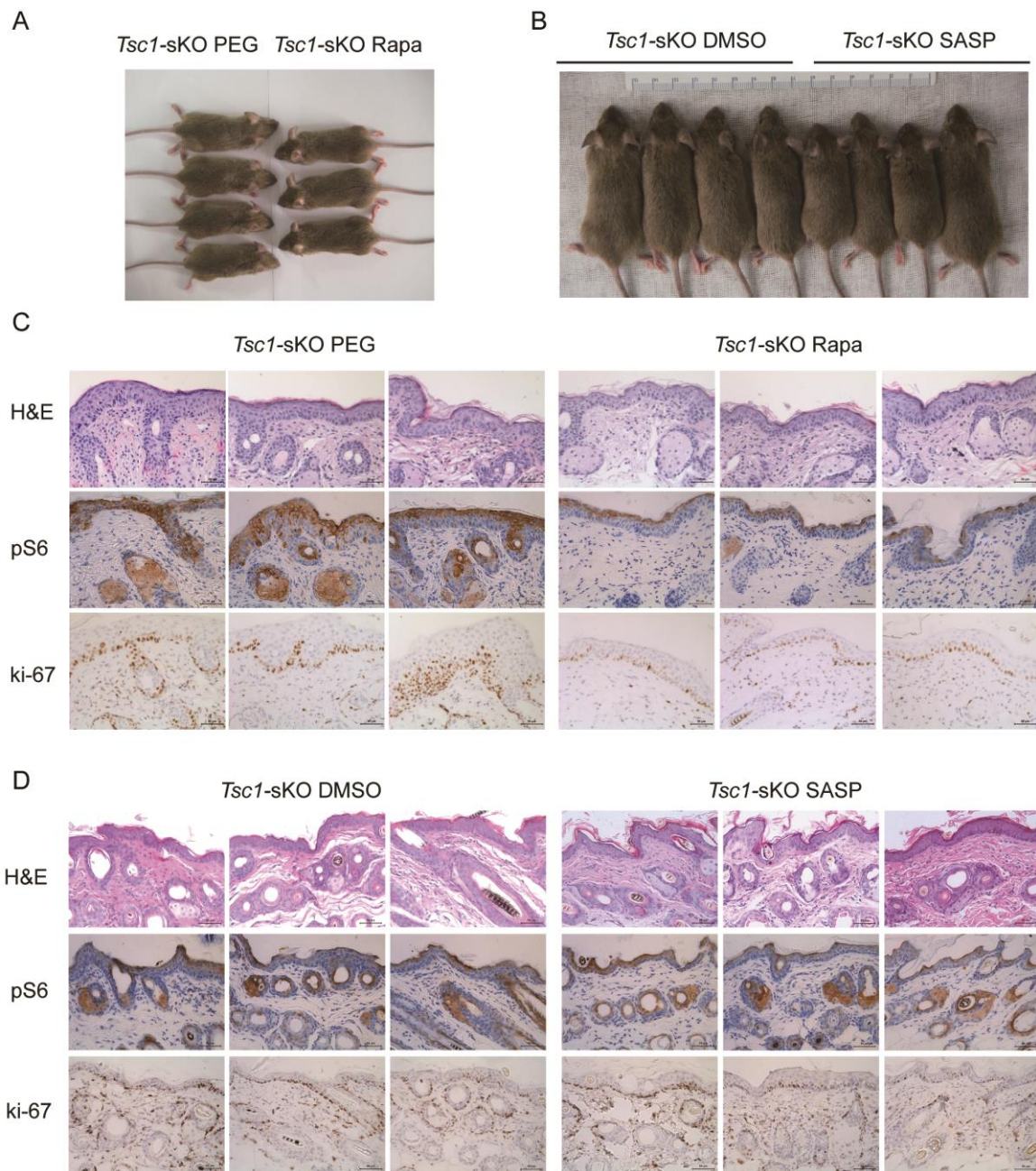


Figure S3. *Tsc1*-sKO mice treated with mTOR or xCT inhibitor. (A, C) Seven weeks old *Tsc1*-sKO mice were treated with rapamycin (Rapa) or its solvent. (B, D) Four weeks old *Tsc1*-sKO mice were treated with SASP or its solvent. Skins of the mice treated with or without rapamycin (Rapa) (C), or treated with or without SASP (D) were stained with hematoxylin-eosin, anti-pS6 S240/244 and ki-67 antibodies. (Scale bars: 50 μ m).