

Supplemental Table 1 PCR primer sets used for qPCR

rat <i>Cyp24A1</i>	Forward 5'-AGCCCGGGGCAGATTCCTCTG-3' Reverse 5'-CATATTCCTCAGGTCTTCCGC-3'
rat β -actin	Forward 5'- AGGCCCAGAGCAAGAGAGGCAT -3' Reverse 5'- CATATCGTCCCAGTTGGTGACA -3
rat <i>Lef-1</i>	Forward 5'- CACACAACTGGCATCCCTCATC -3' Reverse 5'- GCTCCTGTTCTTTCTCTGTTCGT -3
rat <i>Vdr</i> derived from VDR-AdV	Forward 5'- AGGAGCACGTCCTGCTAATG -3' Reverse 5'- GTGTCGGCACCGGATATAGG -3

(A)



2w

(B)



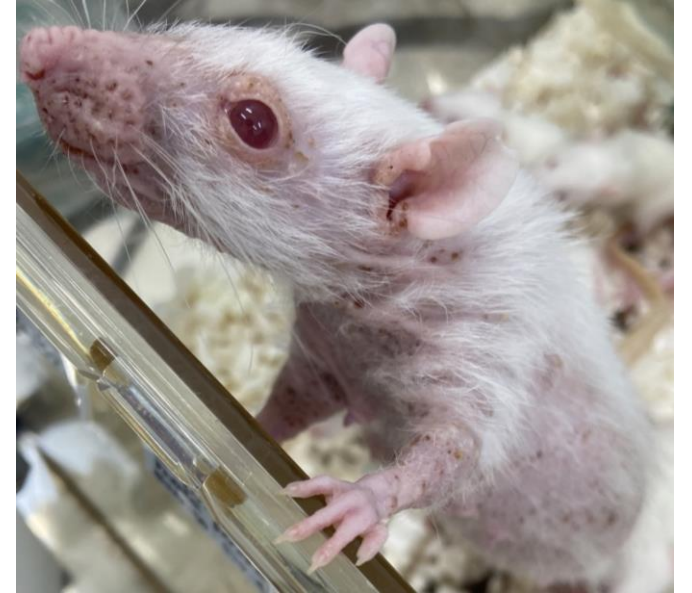
6w

(C)



12w

(D)



24w

Supplemental Fig. 1

Alopecia phenotype of VDR-KO rats with their aging.

Group 1

VDR-AdV-1-1

VDR-AdV-1-2



control-1



Group 2

VDR-AdV-2



control-2



Group 3

VDR-AdV-3

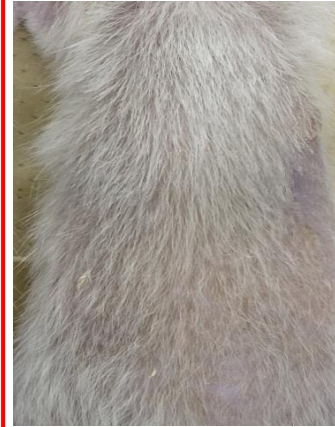


control-AdV-1



Group 4

VDR-AdV-4



control-AdV-2



Group 5

VDR-AdV-5



control-3



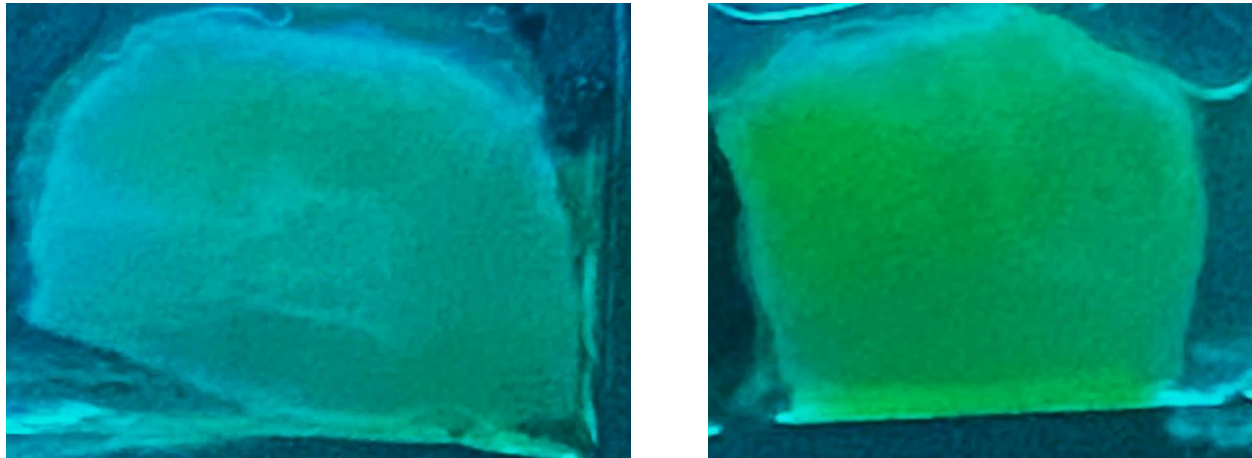
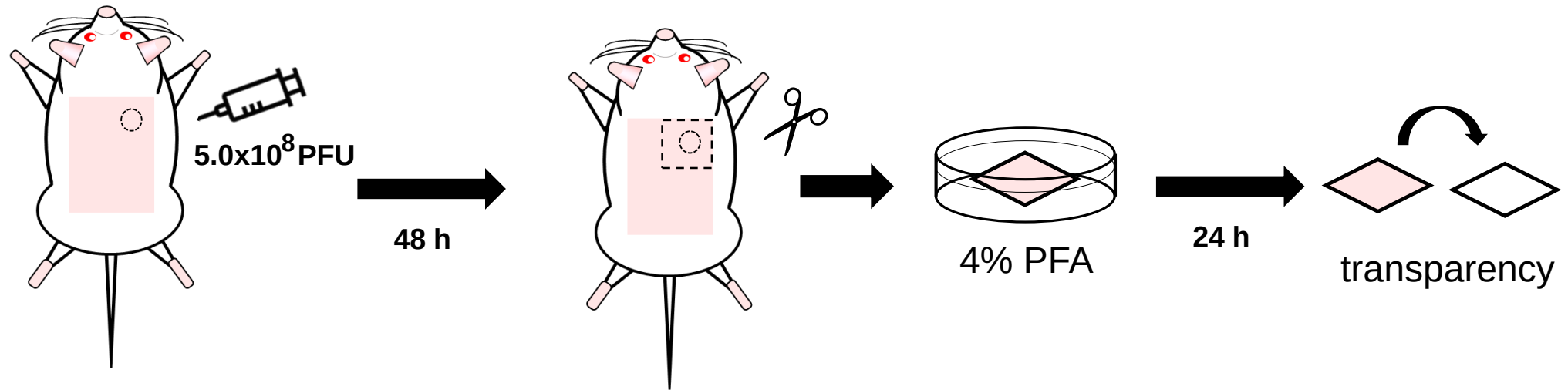
control-4



Supplemental Fig.2

Comparison of hair growth among VDR-Ad infected, non-infected (control), and control-AdV infected Vdr-KO rats. Animal experiments were performed 5 times designated as Group 1 to 5. In the first experiment, 2 rats were infected with VDR-AdV, and 1 rat was non-infected. Conversely, in the fifth experiment, one animal was infected with VDR-AdV and two were non-infected. The black threads observed in Group 1 and 2 were used for suturing after cutting the skin

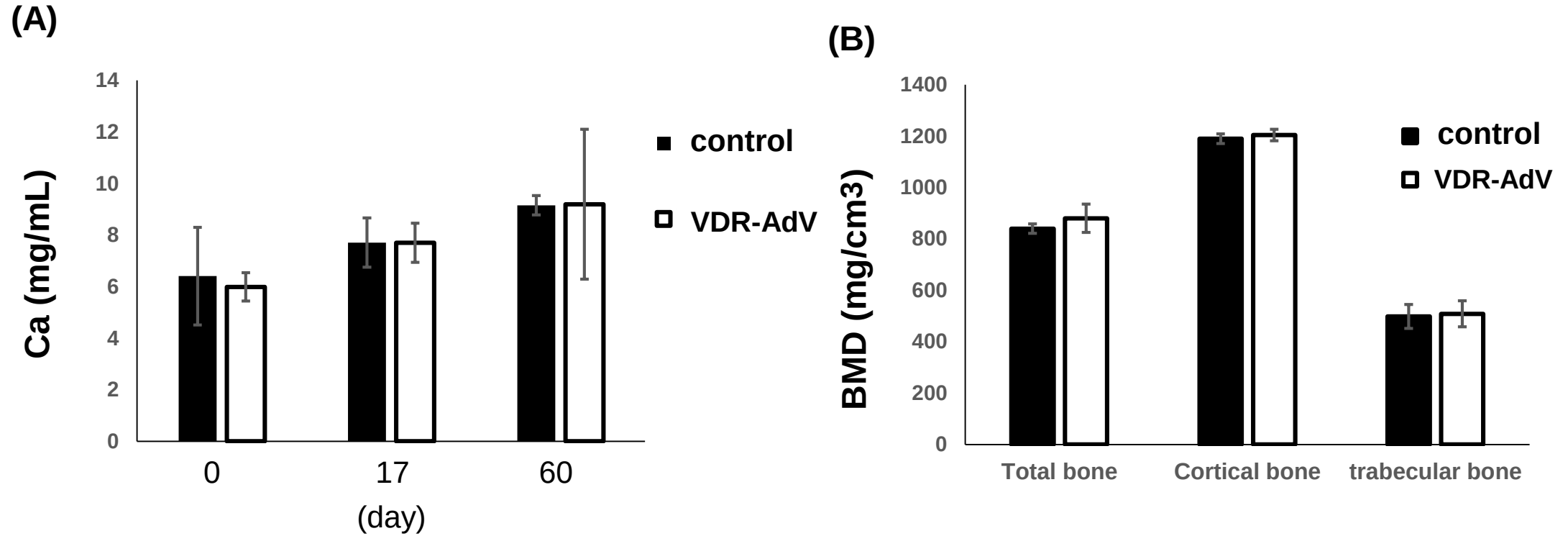
Group 1 : After 30 days from back-hair shaved
Group 2 : After 23 days from back-hair shaved
Group 3 : After 30 days from back-hair shaved
Group 4 : After 26 days from back-hair shaved
Group 5 : After 17 days from back-hair shaved



Supplemental Fig. 3

GFP expression in the skin infected with GFP-AdV after transparency treatment.

The circle and rectangle mean the GFP-AdV infected area, and cut out part, respectively.



Supplemental Fig.4

Comparison of plasma Ca (A) and bone mineral density (B) between VDR-Ad infected and non-infected Vdr-KO rats (n=3).