

24 DNA from WT, heterozygote and WIP Δ ABD littermates with primers c/d, showing
25 a 176 bp WT and 140 bp KI band due to 36 bp deletion from exon 2 upon
26 integration of the targeting construct.

27

28 **FIG S2** Cellularity of thymus and bone marrow from WIP Δ ABD mice. (A) Thymus
29 cellularity, representative FACS analysis of CD4⁺ and CD8⁺ cells, and percent
30 CD4⁺ and CD8⁺ cells in the thymi of WIP Δ ABD mice and WT controls. N=6 each
31 group. (B) Bone marrow cellularity, representative FACS analysis of B220⁺ and
32 CD43⁺ or B220⁺ and IgM⁺ cells, and percent pro-B, pre-B, immature, and mature
33 B cells in the bone marrow of WIP Δ ABD mice and WT controls. N=3 each group.
34 Columns and bars represent mean \pm SEM. **p<0.01. n.s., not significant.

35

36 **FIG S3** Defective *in vivo* homing of WIP Δ ABD T cells to LNs. (A) Representative
37 FACS analysis of a mixture of equal numbers of Alexa fluor555-labeled WT T
38 cells (designated by red lettering) and Alexa fluor488-labeled WT or WIP Δ ABD T
39 cells (designated by green lettering) used for injection into genetically matched
40 WT recipients. (B) Representative FACS analysis of cells from the blood and LNs
41 of WT recipients obtained 1 h after *i.v.* administration of a 1:1 mixtures of equal
42 numbers of Alexa fluor555-labeled WT T cells (designated by red lettering) and
43 Alexa fluor488-labeled WT or WIP Δ ABD T cells (designated by green lettering).
44 (C) Quantitative analysis of the homing index of WIP Δ ABD T cells relative to the
45 mean homing index of WT T cells set at 1.0. N=5 each group. *p<0.05.

46

47 **FIG S4** Defective CHS response to oxazolone in WIP Δ ABD mice. (A) CHS in
48 WIP Δ ABD mice and WT controls measured as the difference in thickness
49 between oxazolone- and vehicle-challenged ears. N=8 each group. (B)
50 Representative ear skin histology stained with hematoxylin and eosin (H&E) 24 h
51 post-challenge with oxazolone or vehicle, then visualized by light microscopy.
52 Bar=50 μ m. (C) *Ifn γ* and *Il4* mRNA expression in ears of WIP Δ ABD mice and WT
53 controls 24 h post-challenge with oxazolone or vehicle. Data is represented as
54 fold increase in mRNA levels relative to vehicle-challenged ears of WT mice set at
55 1. N=8 each group. Columns or squares and bars represent mean \pm SEM. *p<0.05.

56

57 **FIG S5** Normal DC migration from the skin to the DLNs in WIP Δ ABD mice. (A)
58 Representative FACS analysis, and percentages and numbers of CD11c⁺FITC⁺
59 DCs in the DLNs of WIP Δ ABD mice and WT controls 24 h following shaving and
60 painting the abdominal area with FITC or vehicle control. N=3 each group. n.d.,
61 not detected. (B) Proliferation and secretion of IL-2, IFN- γ , and IL-13 by naïve WT
62 DO11.10 T cells stimulated with DCs isolated from WIP Δ ABD or WT mice 24 h
63 following EC-sensitization with PBS or OVA, without further addition of OVA in
64 vitro. N=4 each group. Columns and bars represent mean \pm SEM. n.s., not
65 significant.

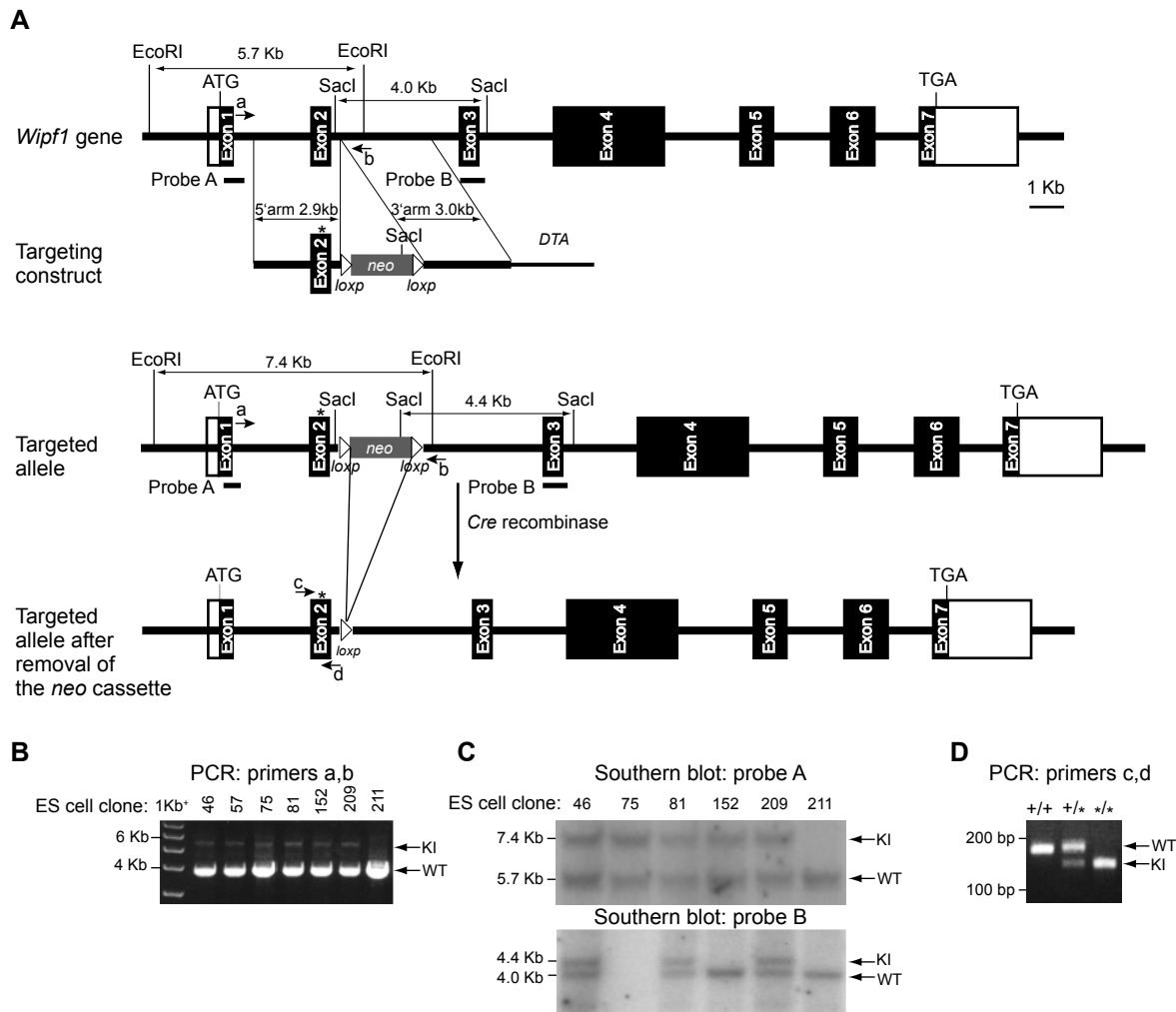
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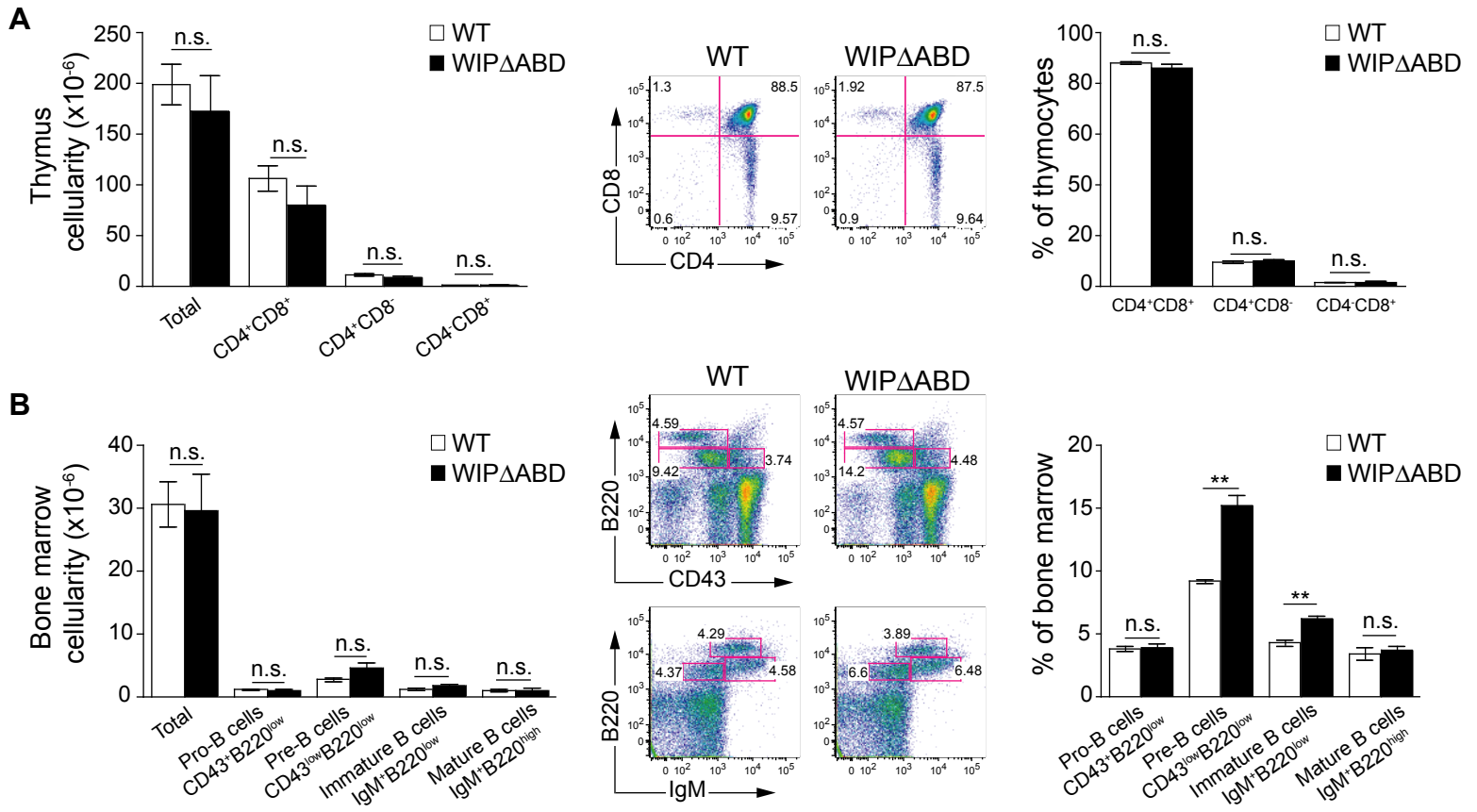
67 **FIG S6** Normal homing of adoptively transferred WT T cells into sites of
68 cutaneous Ag challenge in WIP Δ ABD recipient mice. (A) Representative FACS
69 analysis of CD4⁺KJ1-26⁺ cells in OVA- and PBS-challenged ears of WIP Δ ABD or

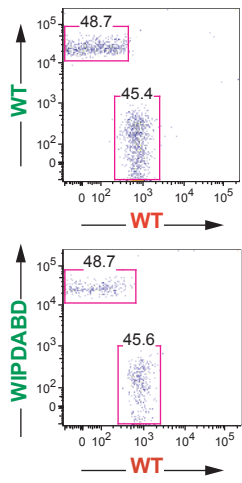
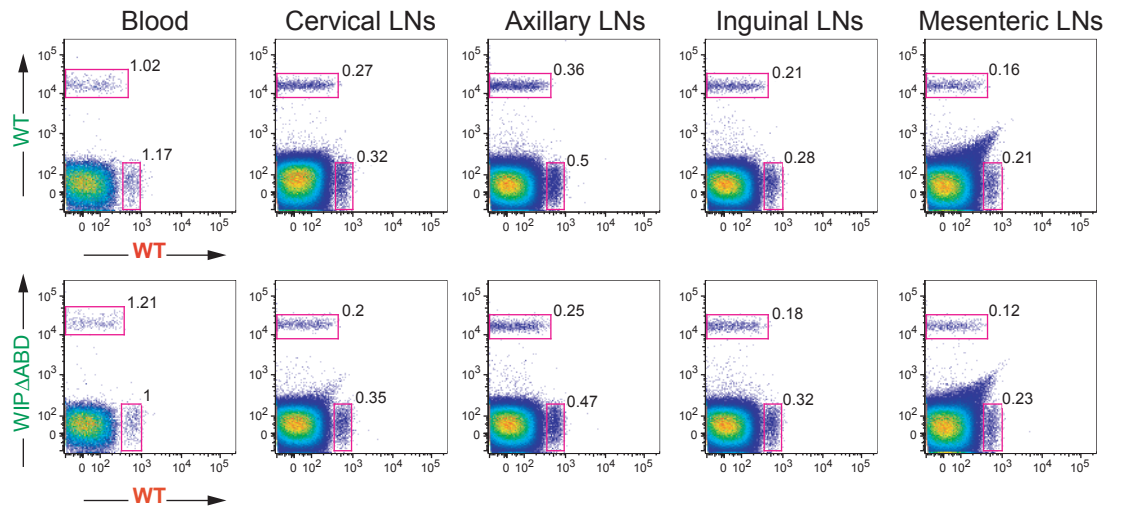
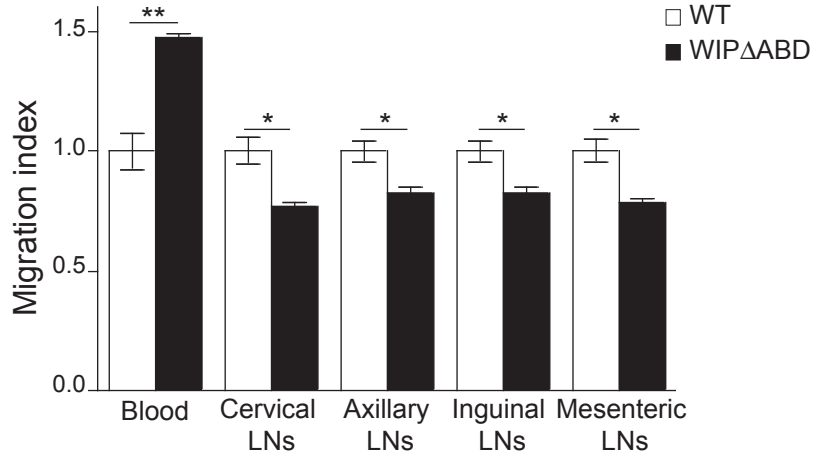
70 WT mice recipients of OVA-stimulated WT DO11.10 CD4⁺ cells. (B) Percentages
71 of CD4⁺KJ1-26⁺ T cells in OVA- and PBS-challenged ears from WIP Δ ABD or WT
72 mice recipients of OVA-stimulated WT DO11.10 CD4⁺ cells. N=5 each group.
73 Columns and bars represent mean \pm SEM. n.s., not significant.

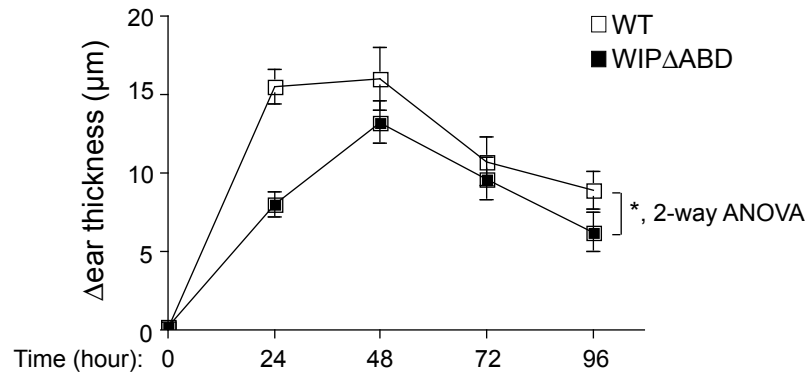
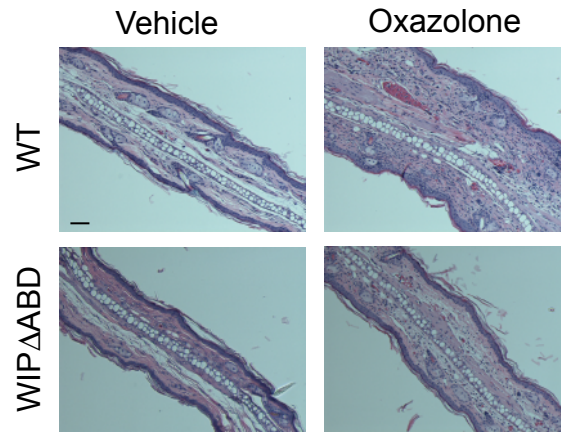
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75 **Movies S1 and S2** Defective motility of T cells from WIP Δ ABD mice. Live imaging
76 of splenic T cells from WT (Movie S1) and WIP Δ ABD (Movie S2) mice stimulated
77 with immobilized anti-CD3 and observed over a period of 20 min.





A**B****C**

A**B****C**