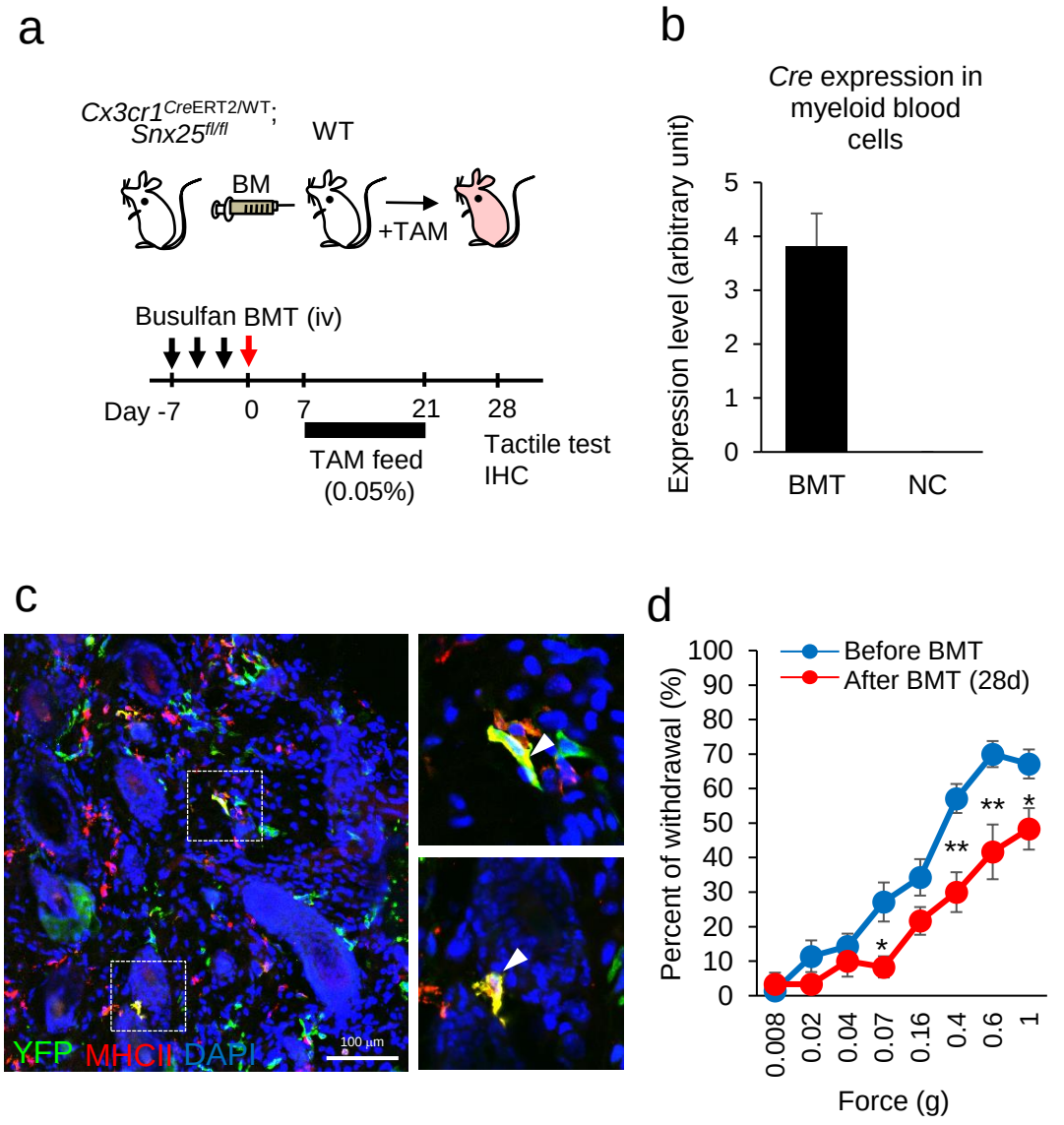
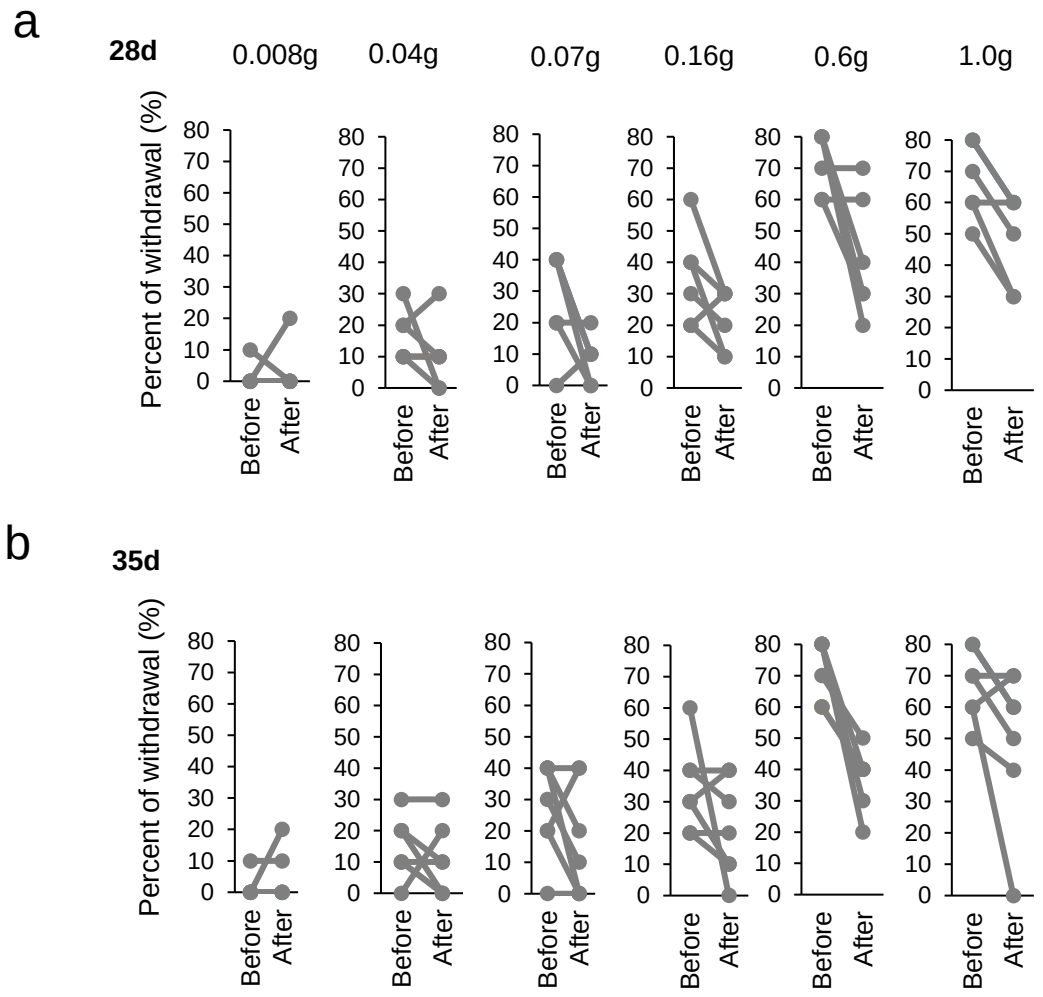
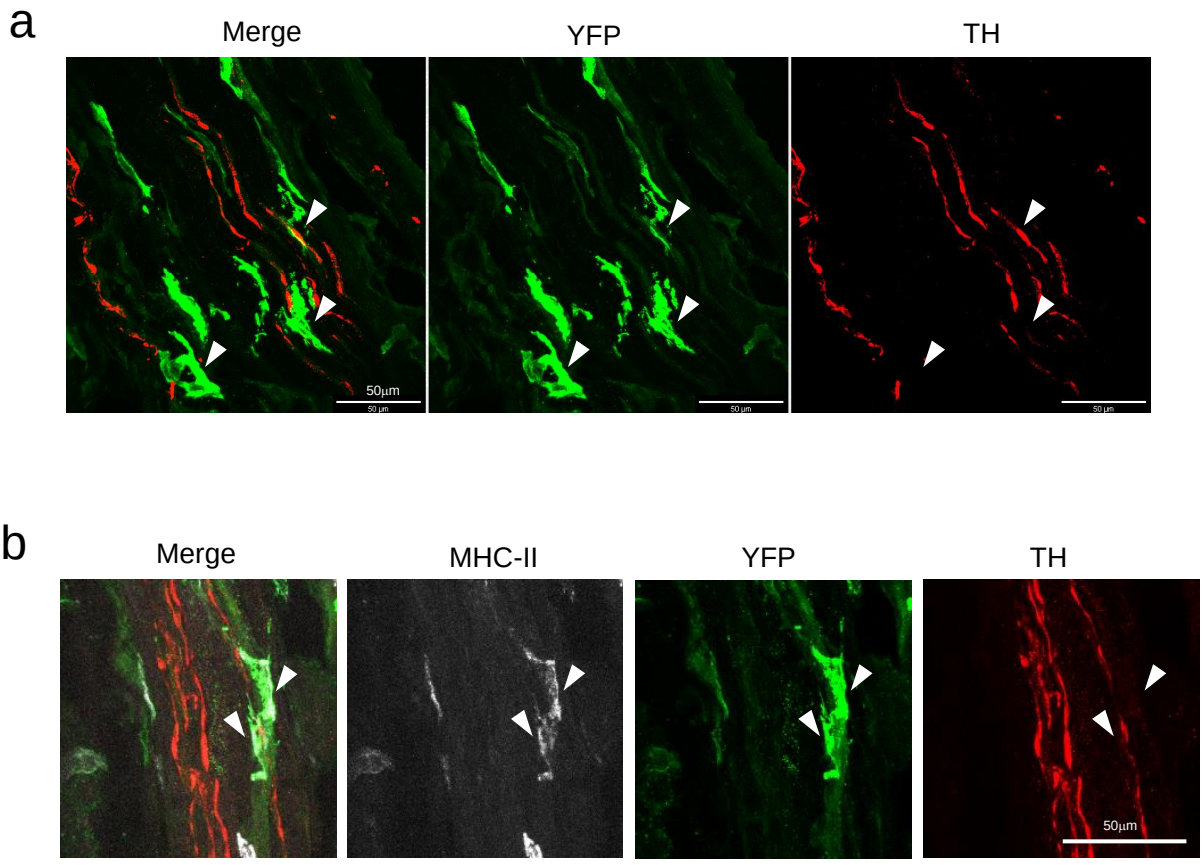
Supplementary Figure 1



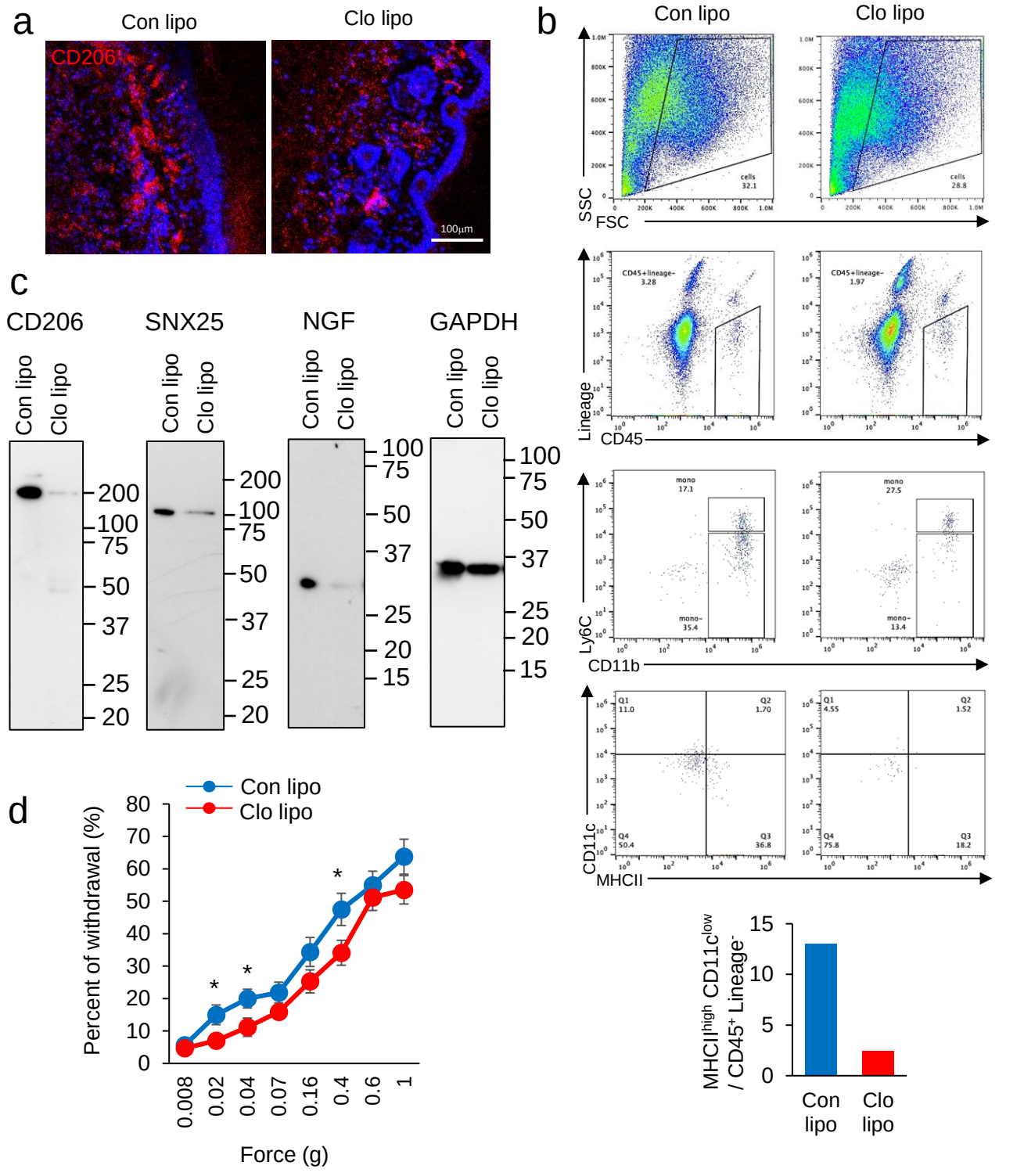
Supplementary Figure 2



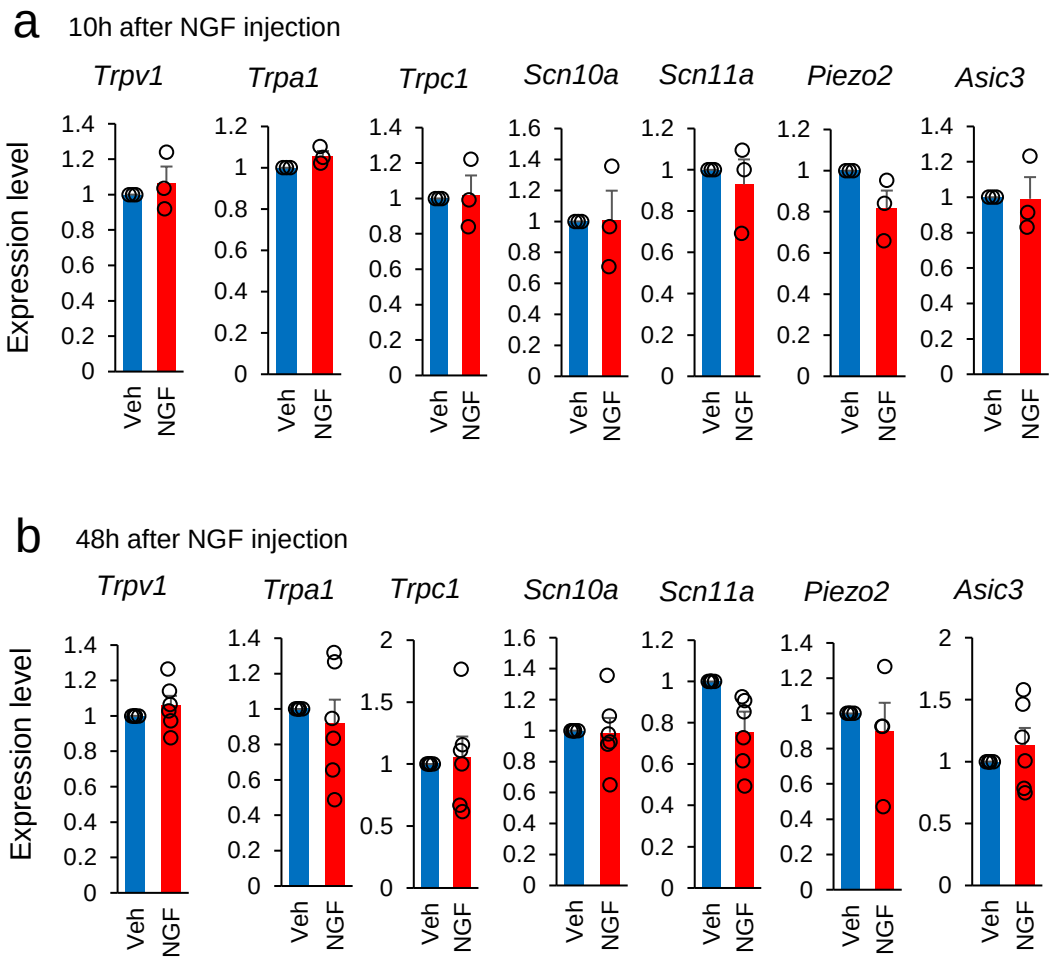
Supplementary Figure 3



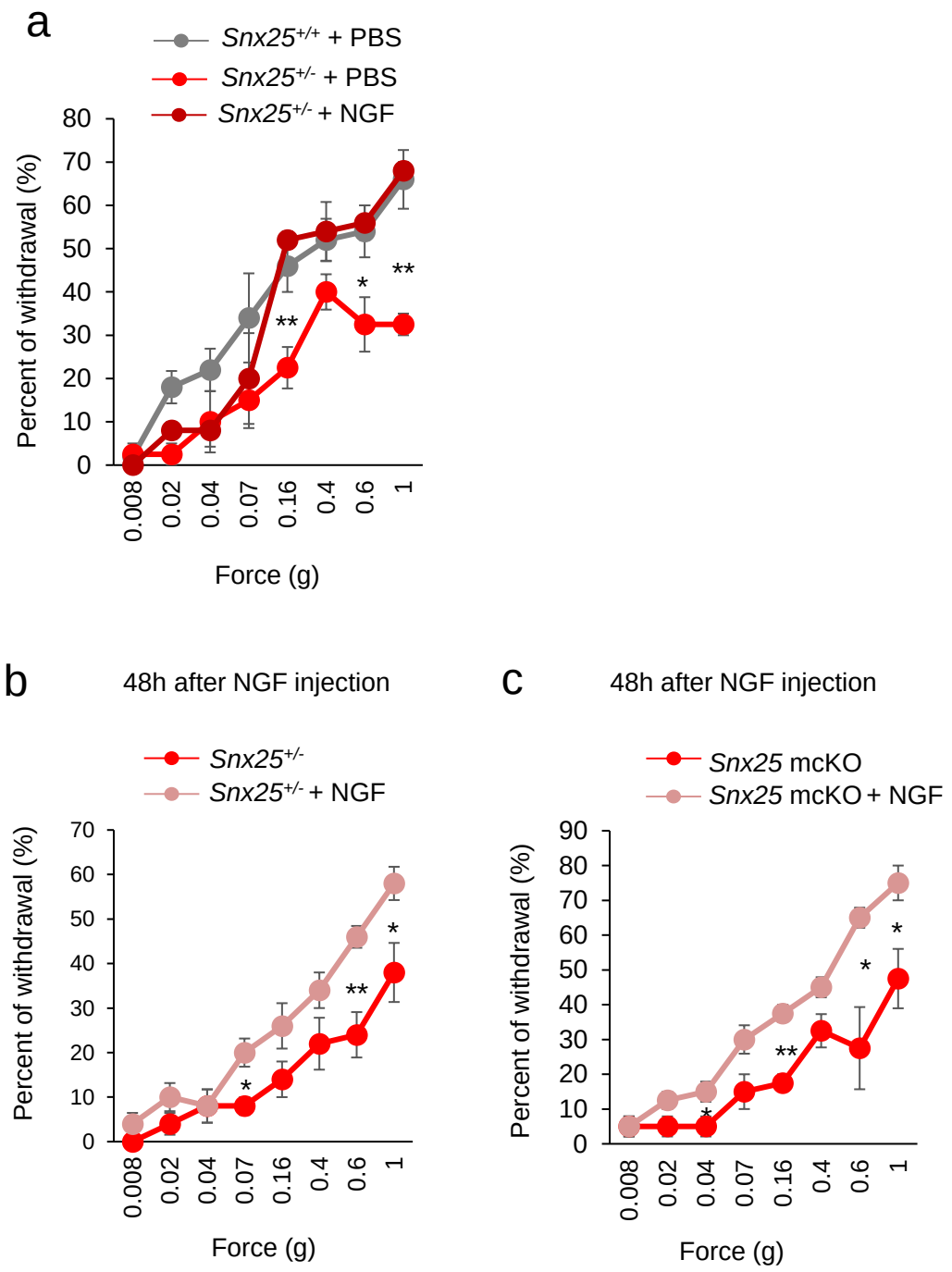
Supplementary Figure 4



Supplementary Figure 5



Supplementary Figure 6



Supplement Figure legends

Supplementary Fig. 1

(**a**) Schedules for generation of BM chimeric mice by transplanting *Snx25* mcKO BM into WT mice, and subsequent tactile test. (**b**) mRNA expression levels for *Cre* in myeloid blood cells of recipient mice at xx d after BMT (n = 6, negative control (NC), n = 3). (**c**) Confocal microscopy of the hind paw skin immunolabeled for YFP and MHC-II in WT mice that received BMT from *Snx25* mcKO; Ai32$^{Tg/+}$ mice treated with TAM for 2 weeks. Boxed areas in the left panel are magnified in the right panels. Scale bar, 100 μm. (**d**) Tactile test in chimeric mice (*Snx25* mcKO BM → WT: n = 7, 28 days after BMT). 0.07g; $p = 0.018$, 0.4g; $p = 0.003$, 0.6g; $p = 0.006$, 1.0g; $p = 0.024$. The data are expressed as the mean ± S.E.M. *$p < 0.05$, **$p < 0.01$. Statistical analyses were performed using the Student's *t*-test.

Supplementary Fig. 2

(**a**) Changes of percent of withdrawal before and after BMT in each individual chimeric mice (*Snx25* mcKO BM → WT, 28 days after BMT). (**b**) T Changes of percent of withdrawal before and after BMT in each individual chimeric mice (*Snx25* mcKO BM → WT, 35 days after BMT).

Supplementary Fig. 3

(**a**) Confocal images of hind paw skin (naïve) stained for YFP (green) and TH (red) in 4-OHT-treated *Cx3cr1*^{CreER}; *Snx25*$^{fl/fl}$; Ai32 mice. Arrowheads denote nerve-associated YFP^{+} cells. (**b**) Confocal images of hind paw skin (naïve) stained for YFP (green), MHC-II (white), and TH (red) in 4-OHT-treated *Cx3cr1*^{CreER}; *Snx25*$^{fl/fl}$; Ai32 mice. Arrowheads

denote nerve-associated YFP^+ cells.

Supplementary Fig. 4

(**a**) Confocal images of hind paw skin immunolabeled for CD206 in WT mice injected with control liposomes (Con lipo) or clodronate liposomes (Clo lipo) into hind paws. (**b**) Flow cytometry strategy to sort dermal macrophages from the hind paw skin of three mice using CD45, Ly6C, CD11b, CD11c, MHC-II, and lineage (CD3, CD19, Nk1.1, TER119, Ly6G) marker expression. MHC-II^{high} $CD11c^{low}$ cells; Con lipo, 13.02%; Clo lipo, 2.43%. (**c**) Expression levels of CD206, SNX25, NGF, and GAPDH in the hind paw skin of the Con lipo-injected and Clo lipo-injected mice were examined by Western blotting. (**d**) Fine tactile sensitivity was examined with von Frey filaments whose mechanical pressure ranged from 0.008 *g* to 1 *g*, in WT mice at 24 h after Con lipo injection (n = 16) and in WT mice at 24 h after Clo lipo injection (n = 17). 0.02g; $p = 0.031$, 0.04g; $p = 0.036$, 0.4g; $p = 0.040$.

Supplementary Fig. 5

(**a**) mRNA expression levels for mechanosensory factors in DRG of mice at 10 h after injection with NGF and PBS (Veh: n = 3; NGF: n = 3). (**b**) mRNA expression levels for mechanosensory factors in DRG of mice at 48 h after injection with NGF and PBS (Veh: n = 5; NGF: n = 5). Results are represented as mean ± SEM. Statistical analyses were performed using the Welch's *t*-test.

Supplementary Fig. 6

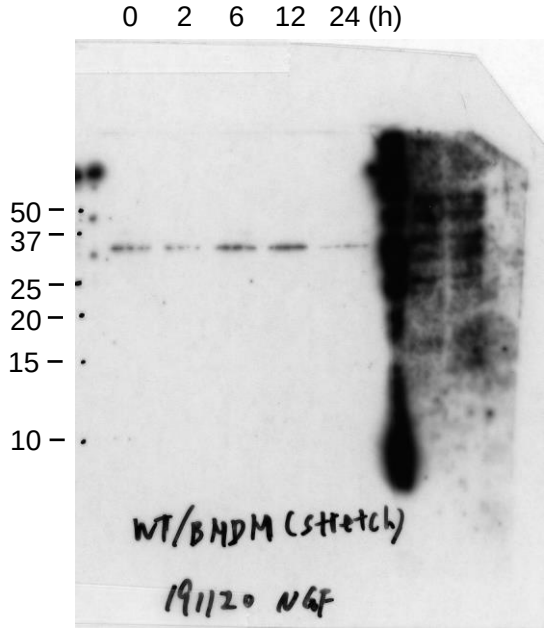
(**a**) Fine tactile sensitivity was examined with von Frey filaments whose mechanical

pressure ranged from 0.008 g to 1 g, in *Snx25*$^{+/-}$ mice and in *Snx25*$^{+/-}$ mice at 24 h after NGF and PBS (Veh) injection (*Snx25*$^{+/+}$ +PBS: n = 5; *Snx25*$^{+/-}$ +PBS: n = 4; *Snx25*$^{+/-}$ +NGF: n = 5;). 0.16g; $p = 0.0005$, 0.6g; $p = 0.013$, 1.0g; $p = 9.82e\text{-}06$. (**b**) Fine tactile sensitivity was examined with von Frey filaments whose mechanical pressure ranged from 0.008 g to 1 g, in *Snx25*$^{+/-}$ mice and in *Snx25*$^{+/-}$ mice at 48 h after NGF injection (n = 5). 0.07g; $p = 0.012$, 0.6g; $p = 0.005$, 1.0g; $p = 0.030$. (**c**) Fine tactile sensitivity was examined with von Frey filaments as above, in *Snx25* mcKO mice and in *Snx25* mcKO mice at 48 h after NGF injection (n = 4). 0.04g; $p = 0.050$, 0.16g; $p = 0.001$, 0.6g; $p = 0.022$, 1.0g; $p = 0.032$. $*p < 0.05$, $**p < 0.01$. Results are represented as mean ± SEM. Statistical analyses were performed using the Student's *t*-test.

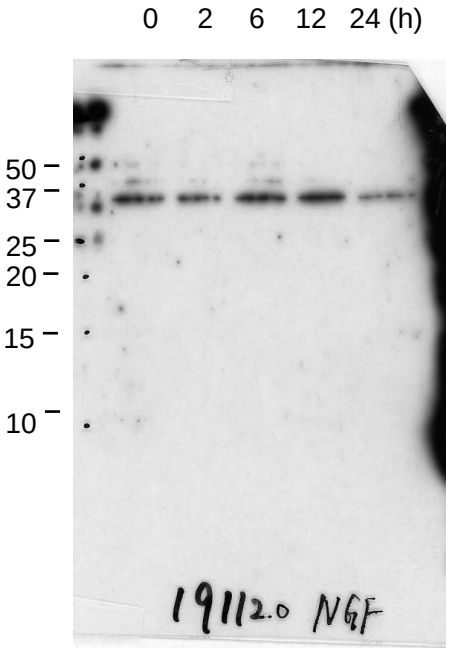
Related Figure 5d

NGF

short exposure



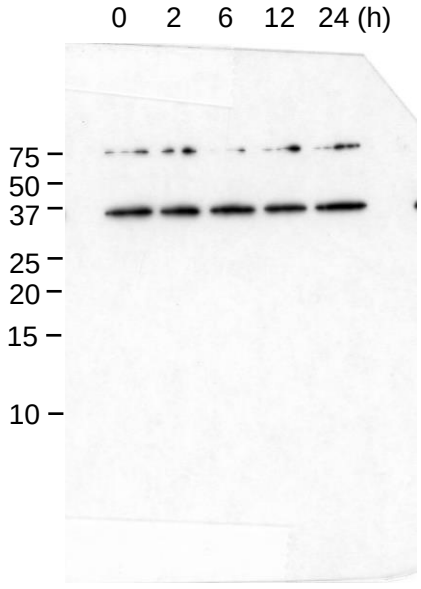
longer exposure



Related Figure 5d

GAPDH

short exposure



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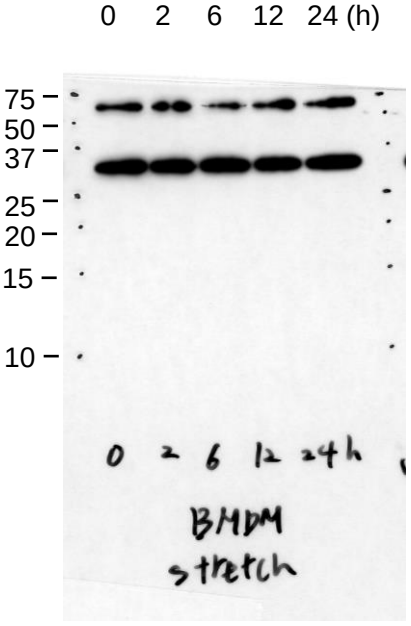
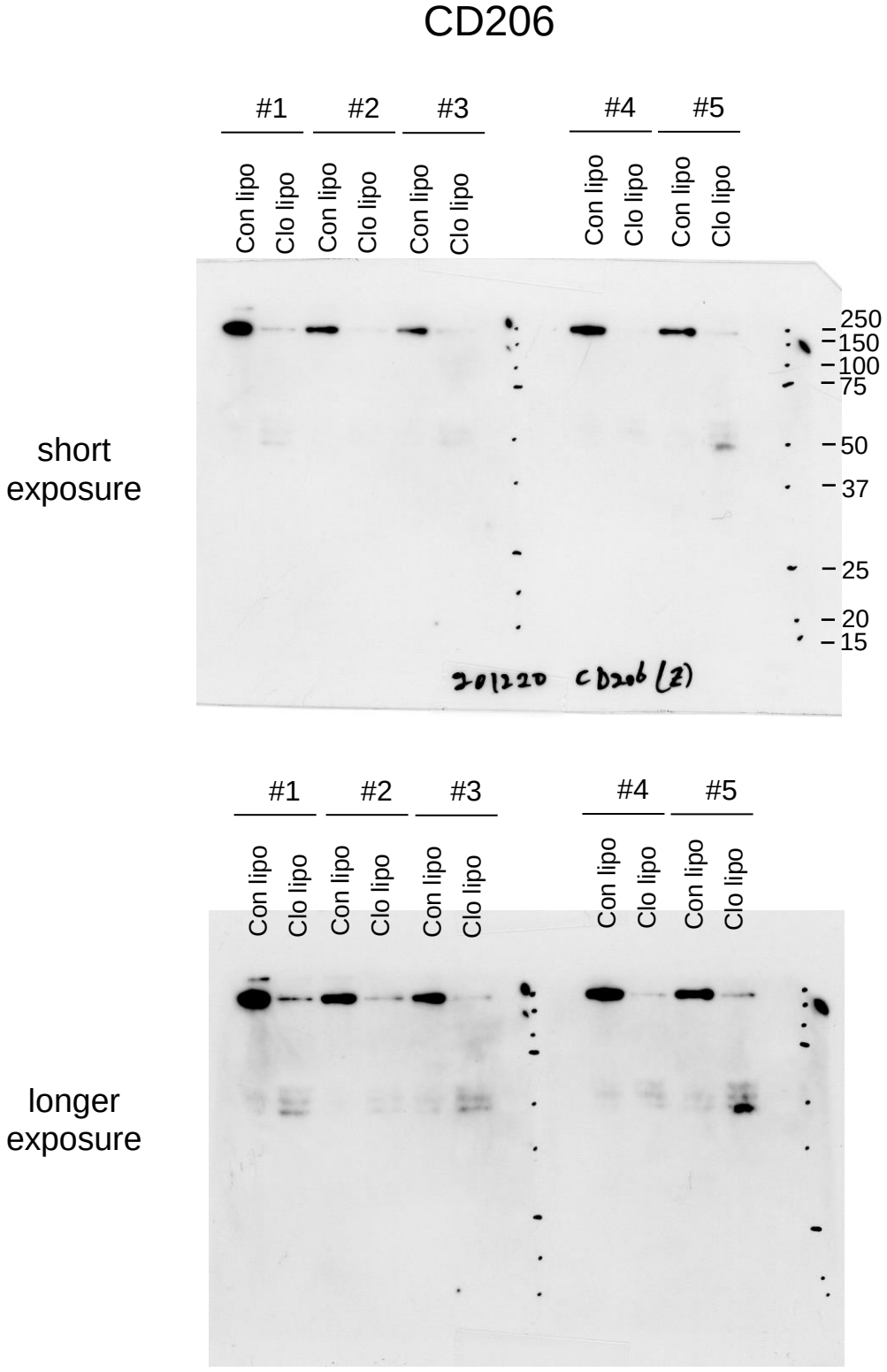
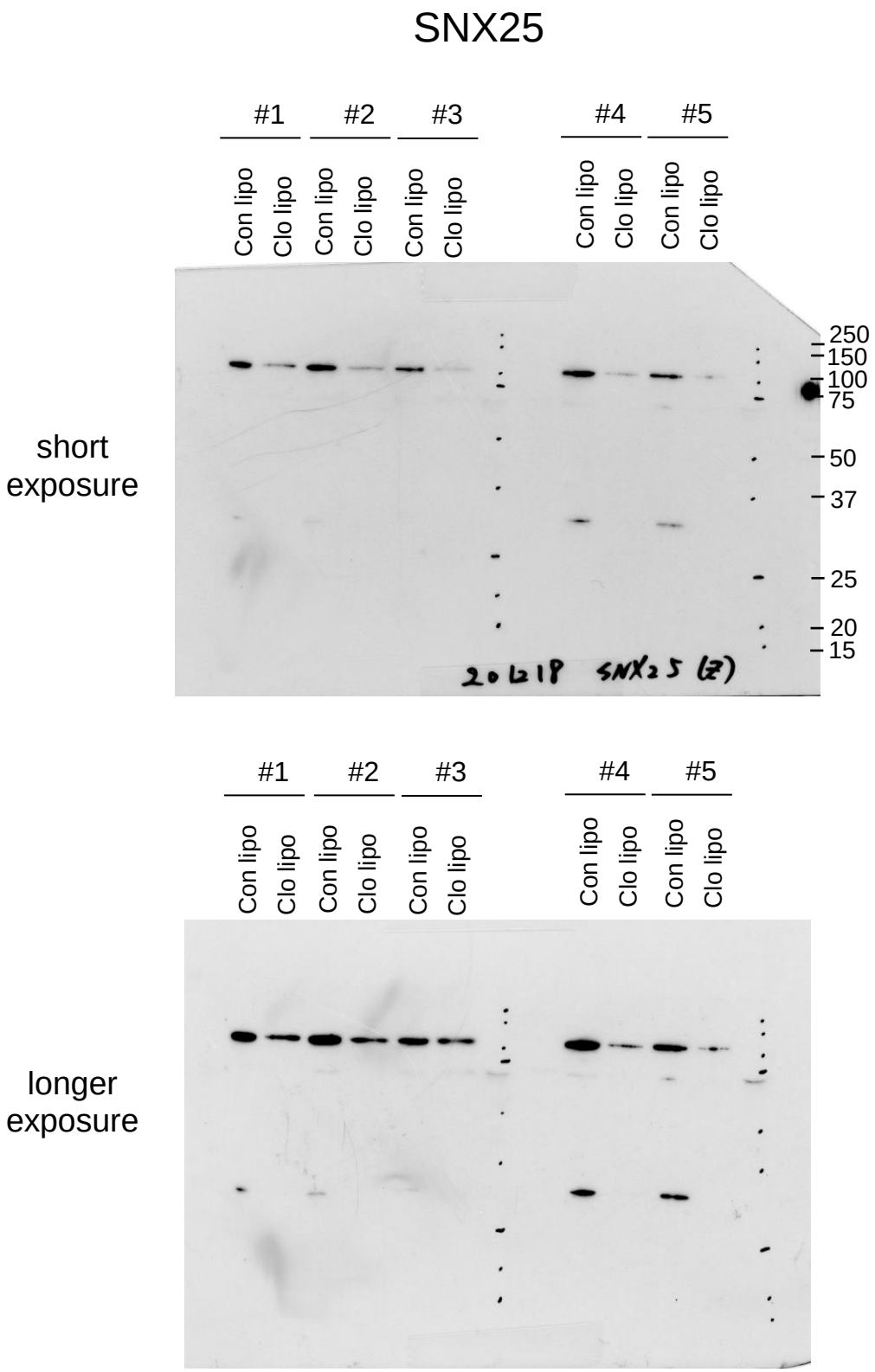


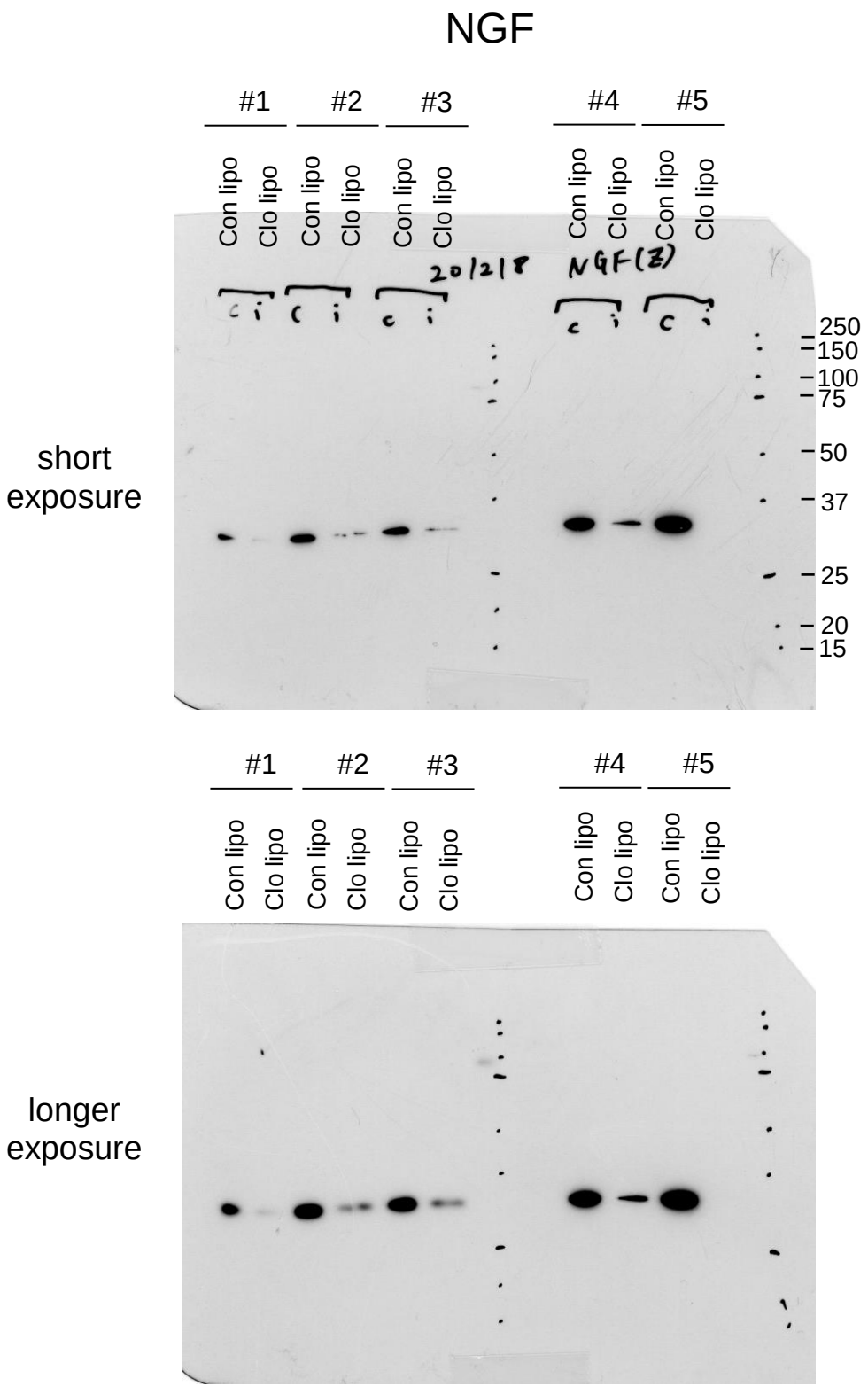
Related Supplementary Figure 4c



Related Supplementary Figure 4c



Related Supplementary Figure 4c



Related Supplementary Figure 4c