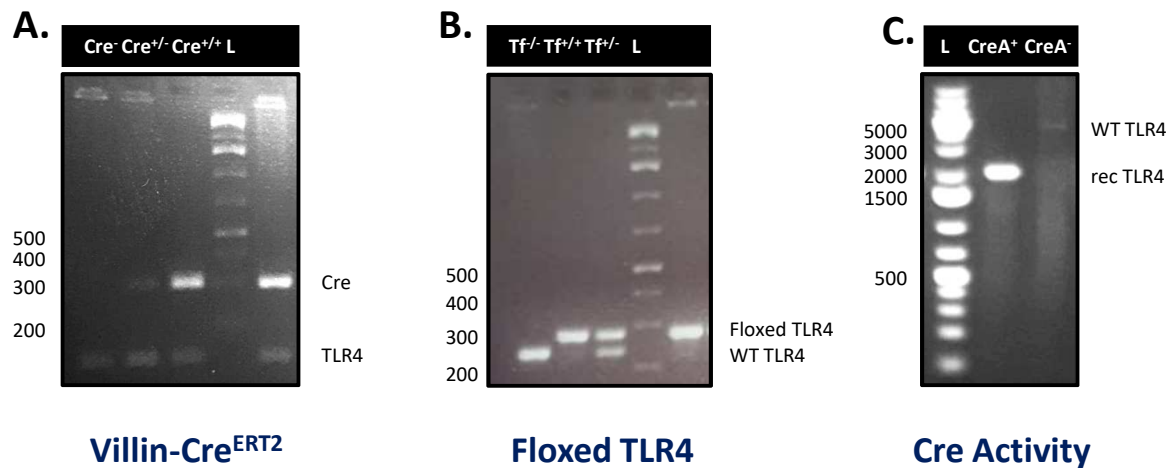


Supplemental Table S1: Exact p values for two-way ANOVA

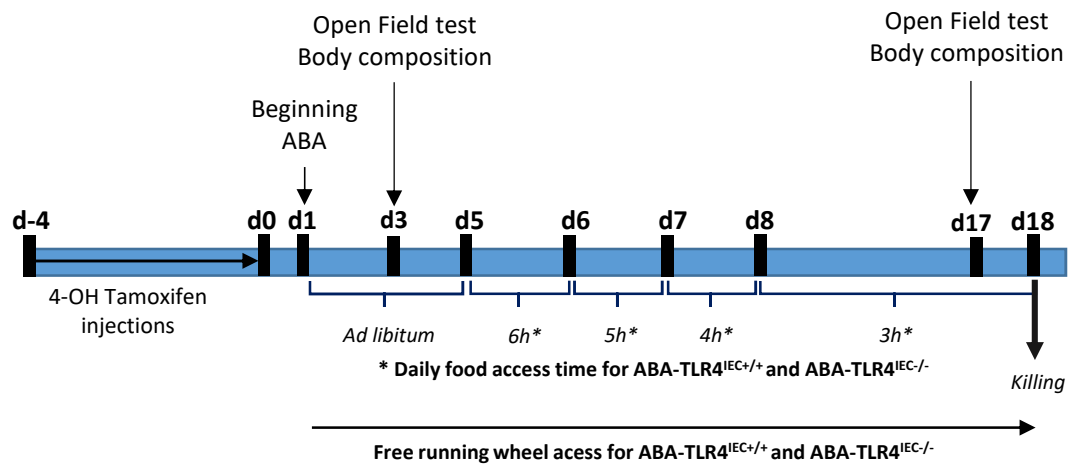
	Figure	Exact p-values for two-way ANOVA		
<u>Body weight change</u>				
For male mice	Fig. 1B	p(ABA)<0.0001	p(TLR4^{IEC})=0.0263	p(Int)=0.0511
For female mice	Fig. 1D	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.9394	p(Int)=0.2526
<u>Food intake (day 1 – day 5)</u>				
For male mice	Fig. 2A	p(ABA)=0.2464	p(TLR4 ^{IEC})=0.0772	p(Int)=0.7267
For female mice	Fig. 2B	p(ABA)=0.3412	p(TLR4 ^{IEC})=0.0625	p(Int)=0.3051
<u>Food intake (day 6 – day 9)</u>				
For male mice	Fig. 2C	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.2538	p(Int)=0.5822
For female mice	Fig. 2D	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.4326	p(Int)=0.2861
<u>Food intake (day 10 – day 17)</u>				
For male mice	Fig. 2E	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.7755	p(Int)=0.2702
For female mice	Fig. 2F	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.5384	p(Int)=0.6897
<u>Body composition at day 3</u>				
Fat mass, For male mice	Fig. S3A	p(ABA)=0.3388	p(TLR4 ^{IEC})=0.9418	p(Int)=0.9418
Fat mass, For female mice	Fig. S3B	p(ABA)>0.9999	p(TLR4 ^{IEC})=0.8081	p(Int)=0.6281
Lean mass, For male mice	Fig. S3C	p(ABA)=0.6220	p(TLR4 ^{IEC})=0.8790	p(Int)=0.7868
Lean mass, For female mice	Fig. S3D	p(ABA)=0.8451	p(TLR4 ^{IEC})=0.7430	p(Int)=0.5056
<u>Body composition at day 17</u>				
Fat mass, For male mice	Fig. 3A	p(ABA)=0.7032	p(TLR4 ^{IEC})=0.8301	p(Int)=0.7658
Fat mass, For female mice	Fig. 3B	p(ABA)=0.8010	p(TLR4 ^{IEC})=0.4911	p(Int)=0.3830
Lean mass, For male mice	Fig. 3C	p(ABA)<0.0001	p(TLR4 ^{IEC})=0.8037	p(Int)=0.9086
Lean mass, For female mice	Fig. 3D	p(ABA)=0.0082	p(TLR4 ^{IEC})=0.8657	p(Int)=0.1021
<u>Adiponectin</u>				
For male mice	Fig. 3E	p(ABA)=0.4842	p(TLR4 ^{IEC})=0.4574	p(Int)=0.8454
For female mice	Fig. 3F	p(ABA)=0.0776	p(TLR4 ^{IEC})=0.7718	p(Int)=0.0099
<u>Leptin</u>				
For male mice	Fig. 3G	p(ABA)=0.0433	p(TLR4 ^{IEC})=0.9989	p(Int)=0.5987
For female mice	Fig. 3H	p(ABA)=0.1167	p(TLR4 ^{IEC})=0.9763	p(Int)=0.8300
<u>Food anticipatory activity</u>				
For male mice	Fig. 4A	p(Time)=0.0039	p(TLR4 ^{IEC})=0.3436	p(Int)=0.5957

<i>For female mice</i>	Fig. 4B	p(Time)=0.0005	p(TLR4 ^{IEC})=0.1164	p(Int)=0.0597
<u>Open field test at day 3</u>				
<i>Time at the center, For male mice</i>	Fig. S4A	p(ABA)=0.4869	p(TLR4 ^{IEC})=0.7126	p(Int)=0.2866
<i>Time at the center, For female mice</i>	Fig. S4B	p(ABA)=0.7744	p(TLR4 ^{IEC})=0.9882	p(Int)=0.5856
<i>Time at the periphery, For male mice</i>	Fig. S4C	p(ABA)=0.4869	p(TLR4 ^{IEC})=0.7126	p(Int)=0.2866
<i>Time at the periphery, For female mice</i>	Fig. S4D	p(ABA)=0.7744	p(TLR4 ^{IEC})=0.9882	p(Int)=0.5856
<i>Immobility time, For male mice</i>	Fig. S4E	p(ABA)=0.4197	p(TLR4 ^{IEC})=0.9746	p(Int)=0.5422
<i>Immobility time, For female mice</i>	Fig. S4F	p(ABA)=0.4465	p(TLR4 ^{IEC})=0.6973	p(Int)=0.2121
<u>Open field test at day 17</u>				
<i>Time at the center, For male mice</i>	Fig. 5A	p(ABA)=0.7120	p(TLR4 ^{IEC})=0.4931	p(Int)=0.9579
<i>Time at the center, For female mice</i>	Fig. 5B	p(ABA)=0.4254	p(TLR4^{IEC})=0.0208	p(Int)=0.3433
<i>Time at the periphery, For male mice</i>	Fig. 5C	p(ABA)=0.7120	p(TLR4 ^{IEC})=0.4931	p(Int)=0.9579
<i>Time at the periphery, For female mice</i>	Fig. 5D	p(ABA)=0.4254	p(TLR4^{IEC})=0.0208	p(Int)=0.3433
<i>Immobility time, For male mice</i>	Fig. 5E	p(ABA)=0.0009	p(TLR4 ^{IEC})=0.5351	p(Int)=0.2730
<i>Immobility time, For female mice</i>	Fig. 5F	p(ABA)=0.0513	p(TLR4 ^{IEC})=0.3364	p(Int)=0.8333
<u>Corticosterone</u>				
<i>For male mice</i>	Fig. 5G	p(ABA)=0.0049	p(TLR4 ^{IEC})=0.1490	p(Int)=0.5838
<i>For female mice</i>	Fig. 5H	p(ABA)=0.0646	p(TLR4 ^{IEC})=0.1977	p(Int)=0.1967
<u>NPY mRNA</u>				
<i>For male mice</i>	Fig. 6A	p(ABA)=0.0265	p(TLR4 ^{IEC})=0.5276	p(Int)=0.4474
<i>For female mice</i>	Fig. 6B	p(ABA)=0.4113	p(TLR4 ^{IEC})=0.8826	p(Int)=0.6416
<u>POMC mRNA</u>				
<i>For male mice</i>	Fig. 6C	p(ABA)=0.0042	p(TLR4 ^{IEC})=0.3887	p(Int)=0.4510
<i>For female mice</i>	Fig. 6D	p(ABA)=0.2935	p(TLR4 ^{IEC})=0.5767	p(Int)=0.3736
<u>MC4R mRNA</u>				
<i>For male mice</i>	Fig. 6C	p(ABA)=0.0014	p(TLR4 ^{IEC})=0.1801	p(Int)=0.6006
<i>For female mice</i>	Fig. 6D	p(ABA)=0.8269	p(TLR4 ^{IEC})=0.5964	p(Int)=0.5562
<u>Total wheel activity per day</u>				
<i>For male mice</i>	Fig. S5A	p(Time)=0.0744	p(TLR4 ^{IEC})=0.8539	p(Int)=0.7764
<i>For female mice</i>	Fig. S5B	p(Time)=0.1777	p(TLR4 ^{IEC})=0.8596	p(Int)=0.8883

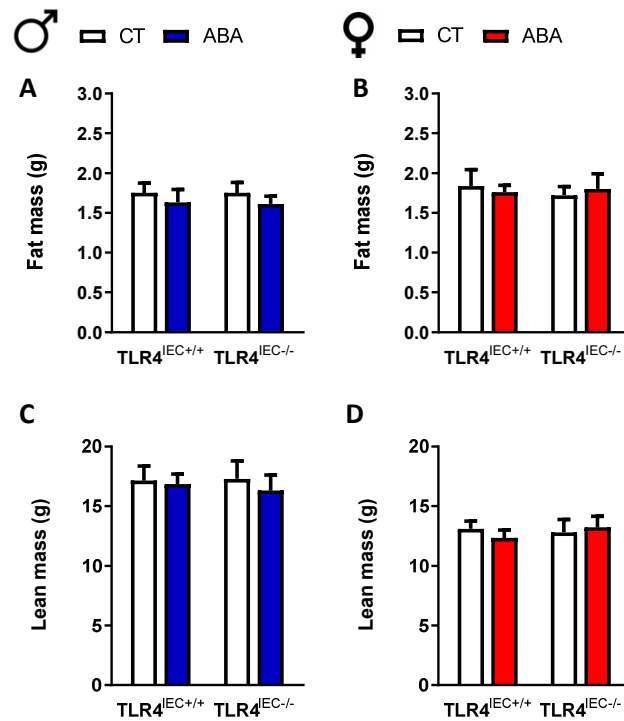


Supplemental Figure S1: Mouse genotyping PCR

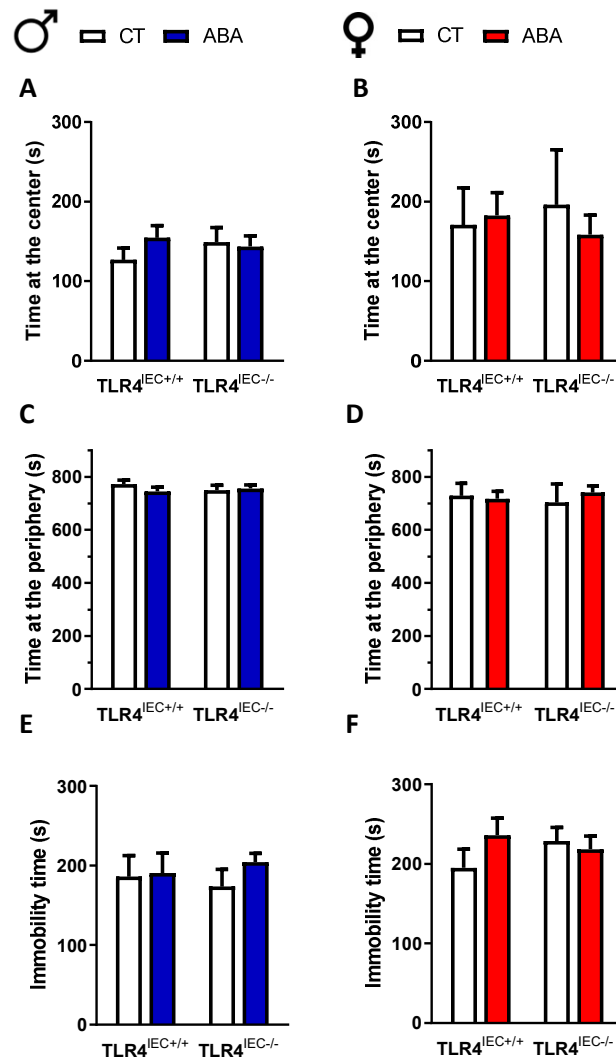
(A.) PCRs directed against Villin-Cre^{ERT2} sequence allow to confirm the presence of the Cre recombinase gene (Cre) while the amplification of TLR4 DNA (TLR4) is a positive control of PCR to avoid false negatives. (B.) The Floxed DNA (Floxed TLR4) amplification reveals the presence or not of the first LoxP site in TLR4 gene or of wild-type (WT) allele. Tf^{+/-}, Tf^{+/-} or Tf^{-/-} indicate the homozygous, heterozygous or WT mice, respectively. For both Villin-Cre^{ERT2} and Floxed TLR4, mice were genotyped on juvenile samples. (C.) To confirm the first genotype and the Cre Activity in the intestine, *post mortem* genotyping was also performed. The Cre Activity PCR amplifies recombinant DNA by using primers from each side of LoxP sites (rec TLR4). In the absence of Cre Activity, only WT TLR4 gene was amplified.



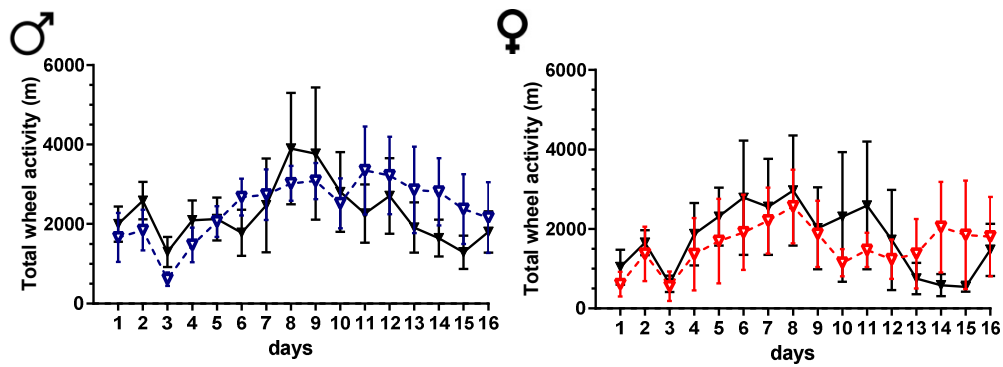
Supplemental Figure S2: Timeline of experimental protocol



Supplemental Figure S3. Body composition at day 3 in male and female mice. Fat (A-B) and lean mass (C-D) in male (A-C) and female (B-D) mice between TLR4^{IEC+/+} and TLR4^{IEC-/-} measured at day 3 of the ABA procedure (blue and red bars in male and female mice, respectively).



Supplemental Figure S4. Open field test at d3 in male and female mice. Time at the centre (A), the periphery (C) and immobility time (E) during open field test at d3 in TLR4^{IEC+/+} and TLR4^{IEC-/-} CT (open bars) and ABA (blue bars) male mice. Time at the centre (B), the periphery (D) and immobility time (F) during open field test at d3 in TLR4^{IEC+/+} and TLR4^{IEC-/-} CT (open bars) and ABA (red bars) female mice.



Supplemental Figure S5. Total wheel activity in male and female ABA mice. Total wheel activity measured in male (A) and female (B) mice in response to the ABA model. Mice were specifically invalidated for TLR4 in intestinal epithelial cells (TLR4^{IEC-/-}, open triangles) or not (TLR4^{IEC+/+}, closed triangles).