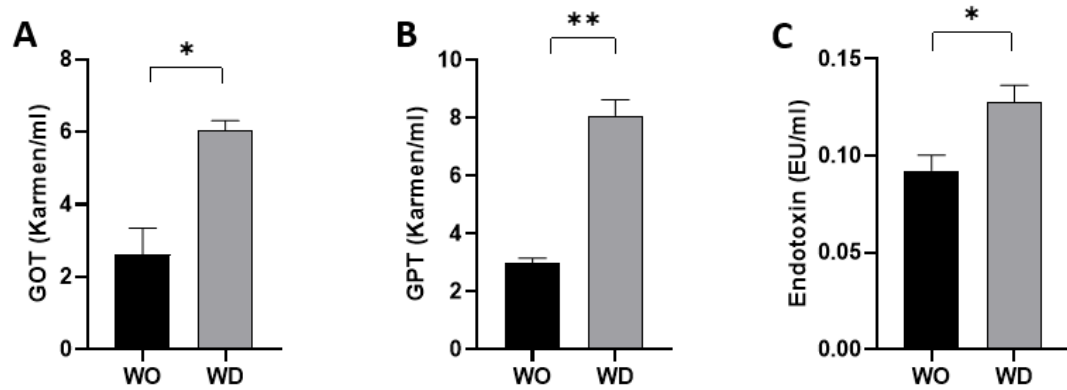


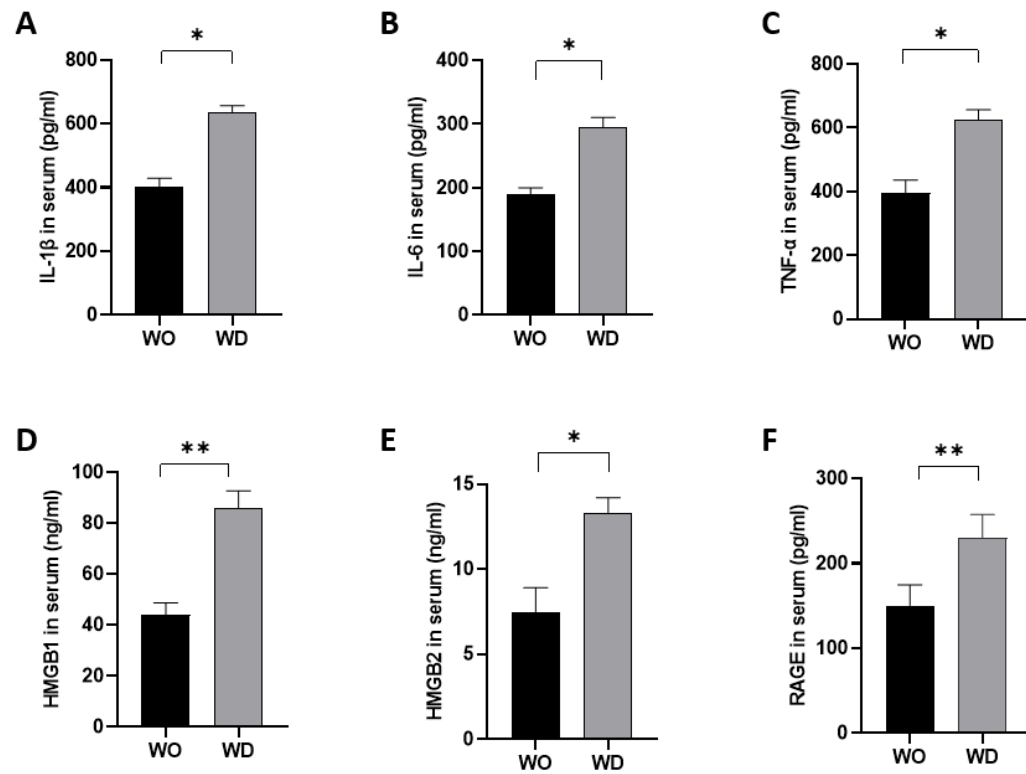
Supplementary Table 1. List of primary and secondary antibodies used in western blot (WB), immunofluorescence (IF), and proximity ligation assays (PLA)

Antibody	Supplier details	Application	Dilution
Rabbit monoclonal anti- HMGB1 antibody [EPR3507]	ab79823, Abcam Limited, Cambridge, UK	IF	1:100
Rabbit monoclonal anti-RAGE antibody [EPR21171]	ab216329, Abcam	IF	1:100
Mouse monoclonal anti-TLR4 antibody	GTX75742, GeneTex, Irvine, CA, USA	IF	1:100
Goat anti-rabbit IgG Alexa Fluor™ 488	A-11008, Invitrogen, Thermo Fisher Scientific	IF	1:1000
Goat anti-mouse IgG FITC	626511, Invitrogen	IF	1:1000
Rabbit monoclonal anti-HMGB1 antibody	ab79823, Abcam	WB	1:1000
Rabbit monoclonal anti-HMGB2 antibody	ab124670, Abcam	WB	1:1000
Rabbit monoclonal anti-RAGE antibody	ab216329, Abcam	WB	1:1000
Rabbit polyclonal anti-TLR4 antibody	ab13556, Abcam	WB	1:1000
Rabbit polyclonal β -tubulin antibody	sc-9104, Santa Cruz Biotechnology, Dallas, TX, USA	WB	1:1000
Goat anti-rabbit IgG-HRP secondary antibody	#31460, Thermo Fisher Scientific	WB	1:10000
Rabbit polyclonal anti-HMGB1 antibody	ab18256, Abcam	PLA	1:200
Goat polyclonal anti-RAGE antibody	AF1179, R&D Systems, Minneapolis, MN, USA	PLA	1:200

Abbreviations: HMGB, high-mobility group box protein; RAGE, receptor for advanced glycation end products; TLR, toll-like receptor; IgG, immunoglobulin G; FITC, fluorescein isothiocyanate; HRP, horseradish peroxidase.



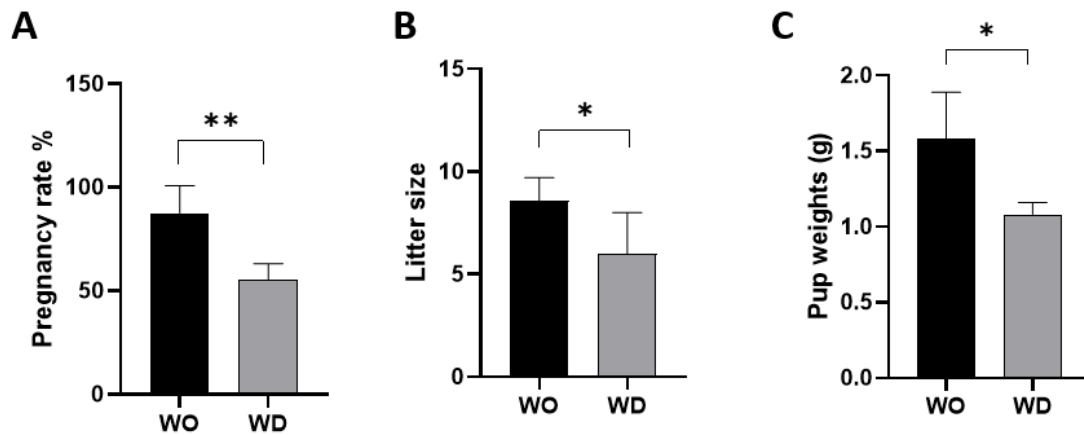
Supplementary data 1. Levels of glutamate oxaloacetate transaminase (GOT; A), glutamate pyruvate transaminase (GPT; B), indicating hepatotoxicity, and endotoxin levels (C) in the serum samples of WO (control group) and WD (dysbiosis-induced group). Values are expressed as the mean $\pm$ SEM. The superscripts denote significance at * $P < 0.05$ and ** $P < 0.01$.



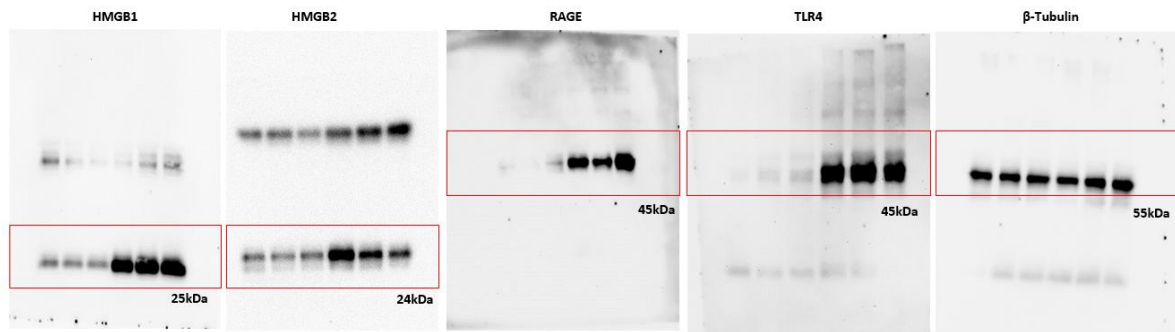
18

19 **Supplementary data 2.** The level of cytokines interleukin (IL)-1 β (A), IL-6 (B), and tumor
 20 necrosis factor (TNF)- α (C), high-mobility group box (HMGB)1 (D), HMGB2 (E), and
 21 receptor for advanced glycation end products (RAGE) (F) in the serum samples of control (WO)
 22 and dysbiosis-induced groups (WD), respectively. Values are expressed as the mean $\pm$ SEM.
 23 The superscripts denote significance at *P<0.05 and **P<0.01.

24



Supplementary data 3. Reproductive outcome. Each male mouse from the control (WO) and dysbiosis group (WD) was mated with a normal female mouse (without dysbiosis). Females were checked daily for the presence of copulation plugs (% pregnancy rate; A). After the postpartum recovery period, the litter size was counted (B), and the weight of each pup was measured (C). Data are presented as mean $\pm$ SEM. The superscript denotes significance at * $P < 0.05$ and $P^{**} < 0.01$.



Supplementary data 4. Full-length uncropped western blot images corresponding to Figure 6. Boxes indicate the regions used in the main manuscript figures. Western blot analyses for target proteins were performed using separate gels with equal amounts of total protein loaded per lane. Corresponding β -tubulin blots were used as loading controls for normalization.