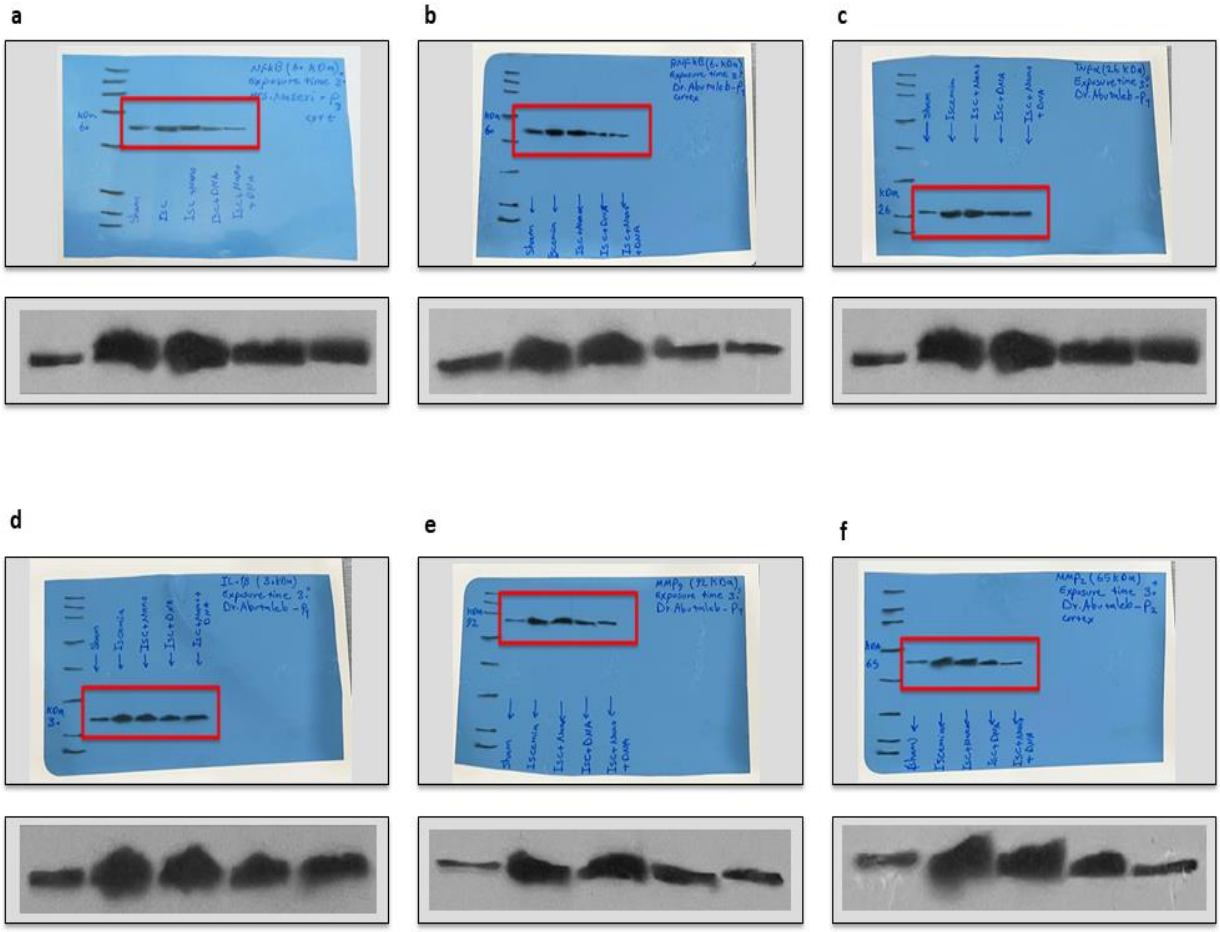
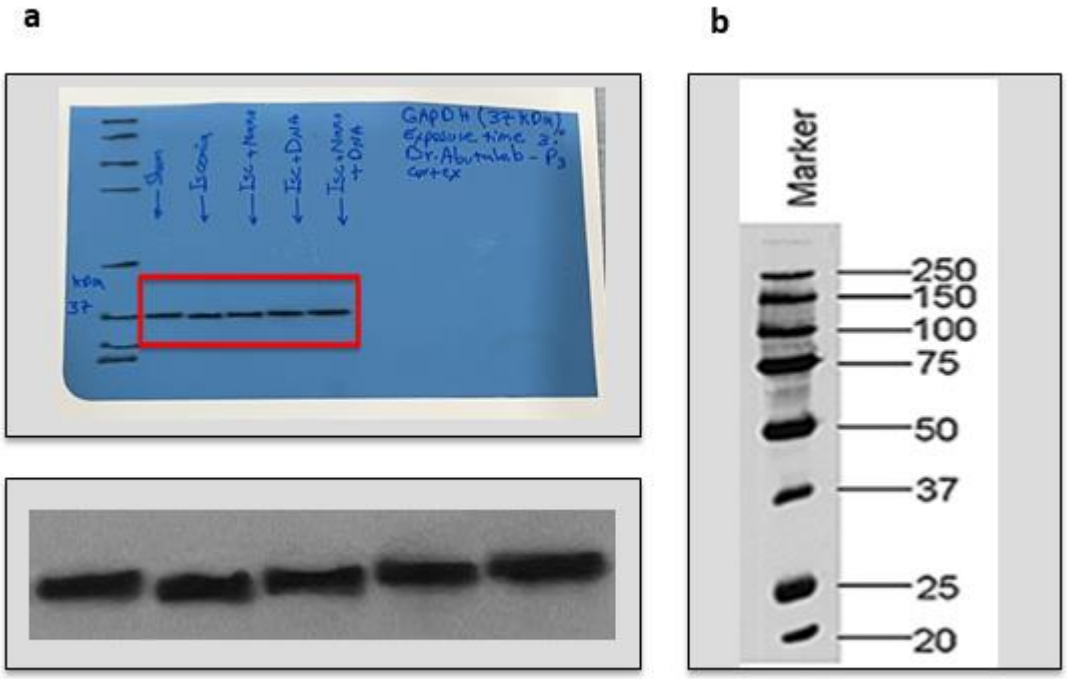


Supplementary Figure S1. Full-length uncropped Western blot images corresponding to figures in the main manuscript. Representative full-length original Western blot images showing protein expression of (a) total NF-κB p65 (corresponding to Figure 8a), (b) phosphorylated NF-κB p65 (corresponding to Figure 8b), (c) TNF-α (corresponding to Figure 9a), (d) IL-1β (corresponding to Figure 9b), (e) MMP-9 (corresponding to Figure 9c), and (f) MMP-2 (corresponding to Figure 9d) across experimental groups. Upper panels display the complete, uncropped membrane images; lower panels show the cropped regions presented in the main manuscript figures. Red boxes in the upper panels indicate the cropped areas. All blot images were cropped exclusively for figure presentation and clarity; no relevant bands or experimental information were removed, altered, or manipulated. Images were converted to grayscale for standardized presentation without modification of original band intensities or signal characteristics. GAPDH served as the loading control for all experiments.



Supplementary Figure2. Full-length GAPDH loading control blot and protein molecular weight marker.

(a) Representative full-length original Western blot membrane for GAPDH loading control used across all experiments presented in Figures 8 and 9. Top: complete uncropped membrane image; bottom: cropped region used in the main manuscript figures. Red box indicates the cropped area presented in the manuscript. (b) Presented protein molecular weight marker (ladder) used for all Western blot experiments, showing standard protein size references ranging from 20 to 250 kDa. GAPDH (37 kDa) served as the internal loading control to normalize protein expression levels across all experimental groups.