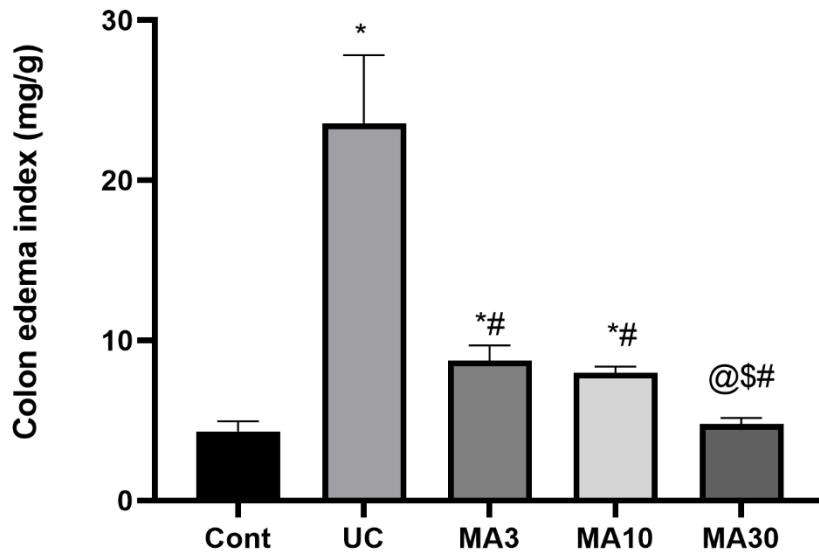**Figure 1S: Effect of MA3, MA10 and MA30 on colon edema index in rats with IAA-induced UC.** Data are presented as mean ± SD (n = 6). Statistical analysis was carried out using one-way ANOVA followed by Tukey's *posthoc* test; P < 0.05. As compared to (*) CONT, (#) UC, (@) MA3 and ($) MA10 groups. CONT: control; MA: mirabegron and UC: ulcerative colitis.

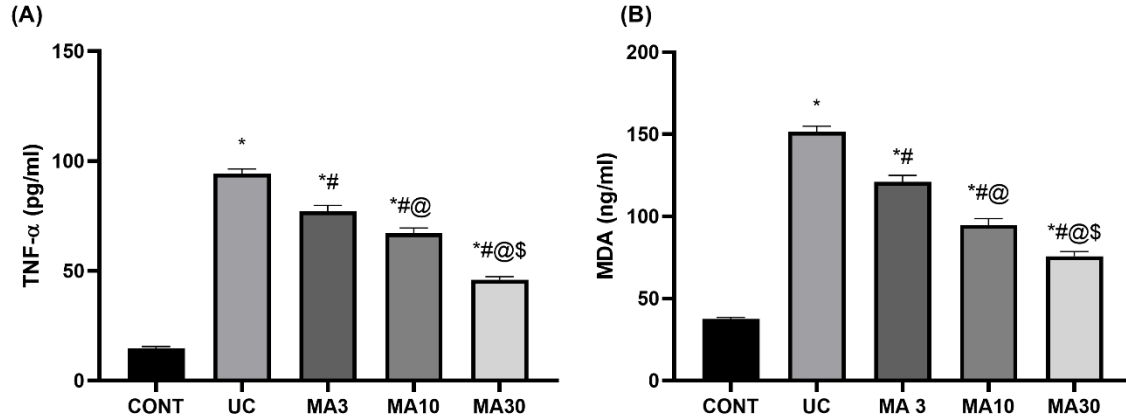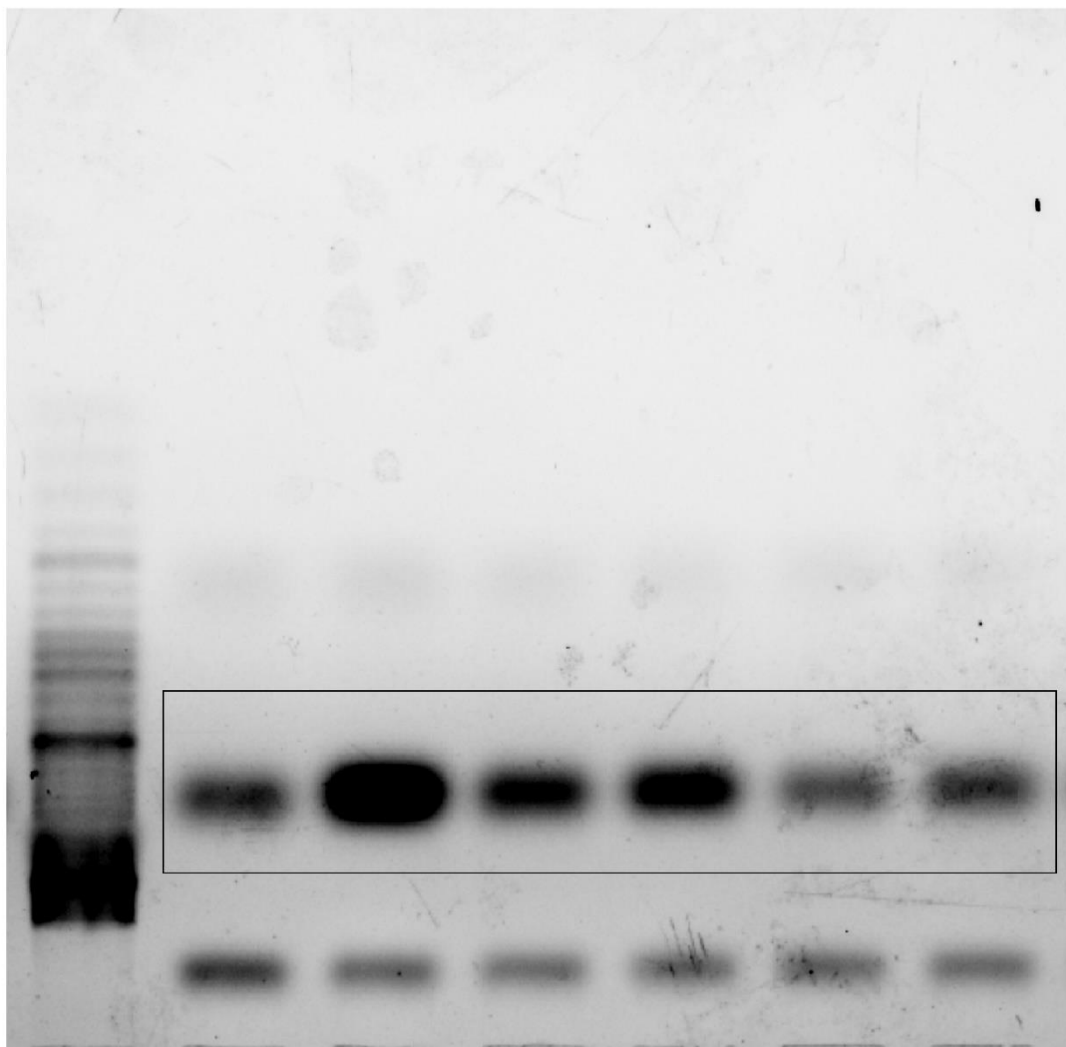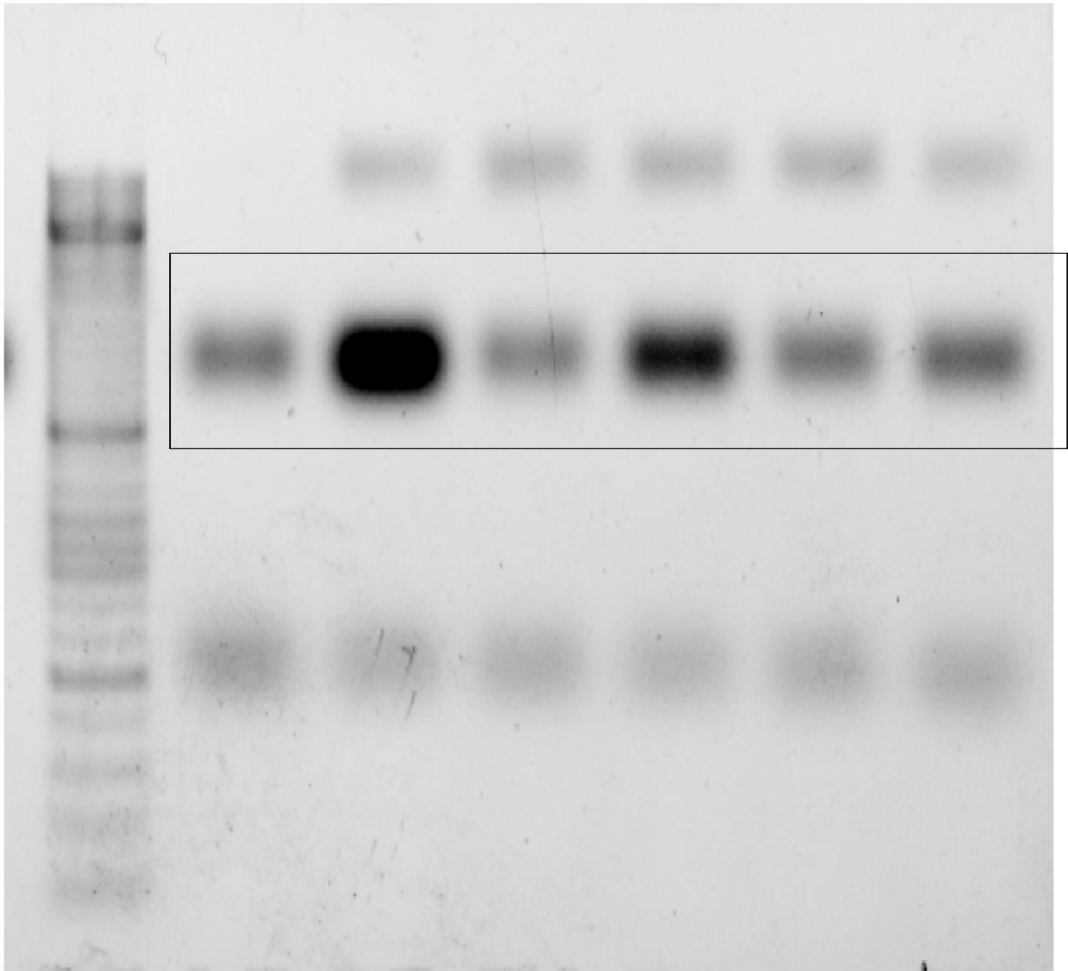**Figure 2S: Effect of MA3, MA10, and MA30 on the colon protein content of (A) TNF-α and (B) MDA in rats with IAA-induced UC.** Data are presented as mean ± SD (n = 6). Statistical analysis was carried out using one-way ANOVA followed by Tukey's *post-hoc* test; $P < 0.05$. As compared to (*) CONT, (#) UC, (@) MA3, and ($) MA10 groups. CONT: control; MA: mirabegron; MDA: malondialdehyde; TNF-α: tumor necrosis factor-alpha; UC: ulcerative colitis.
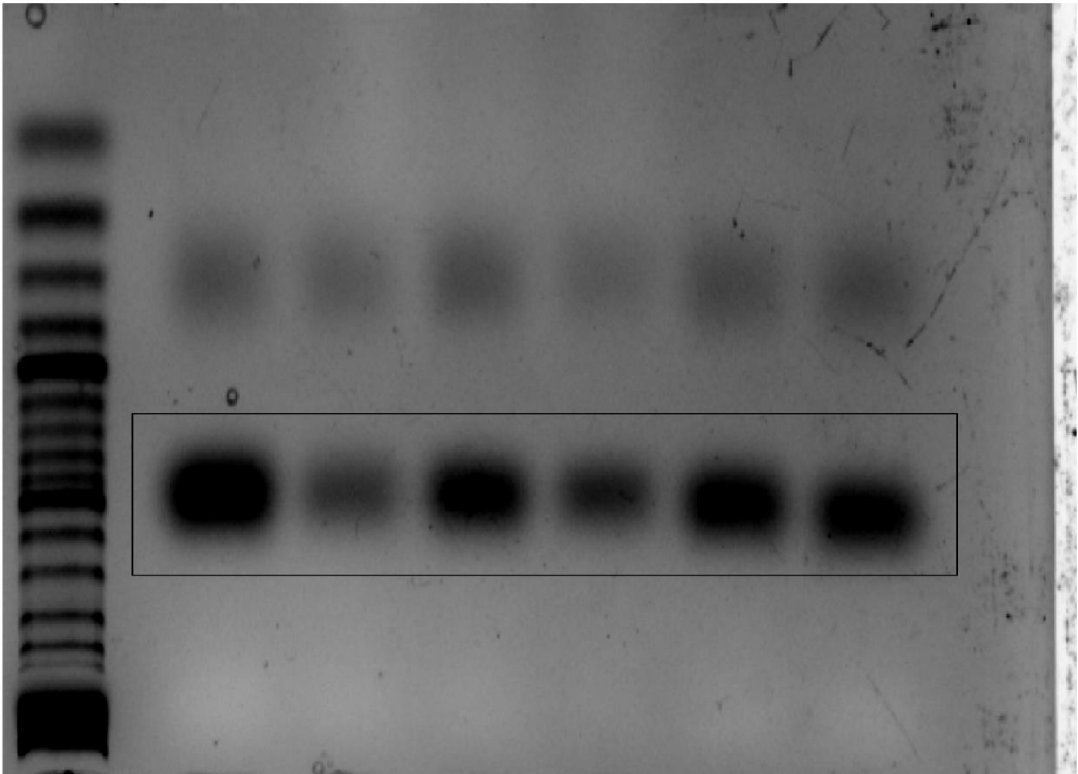
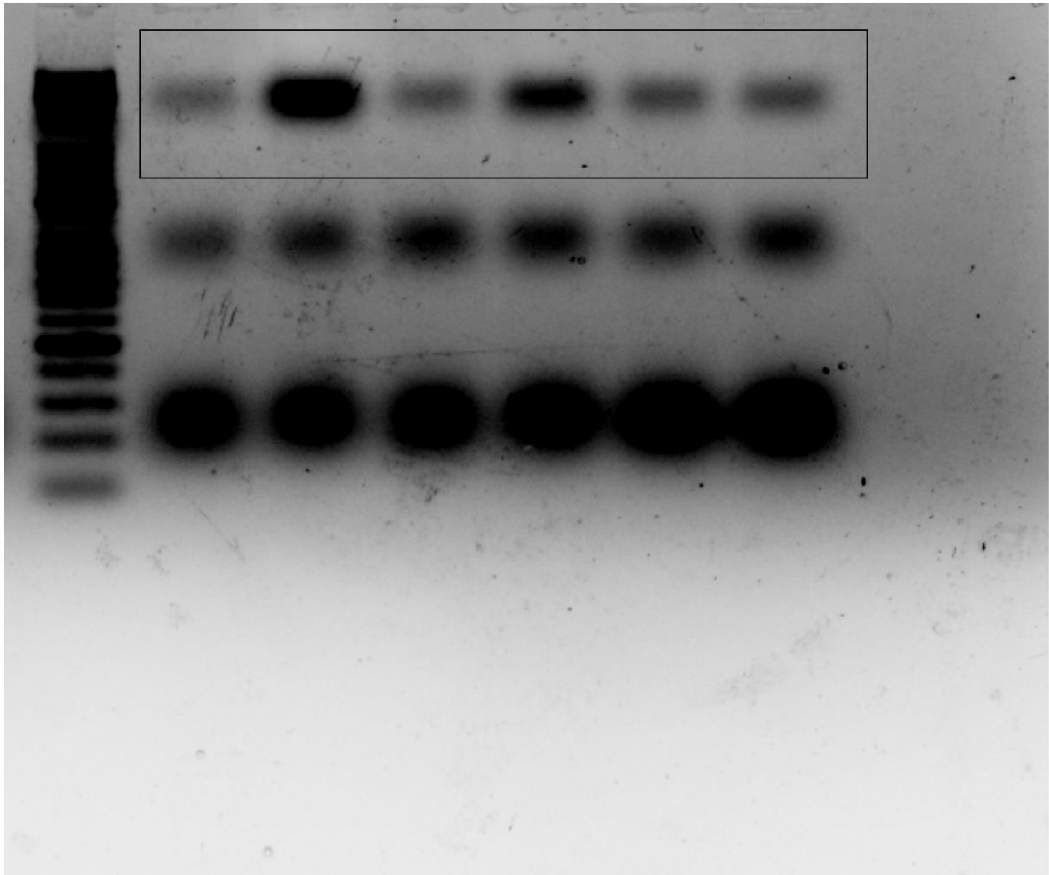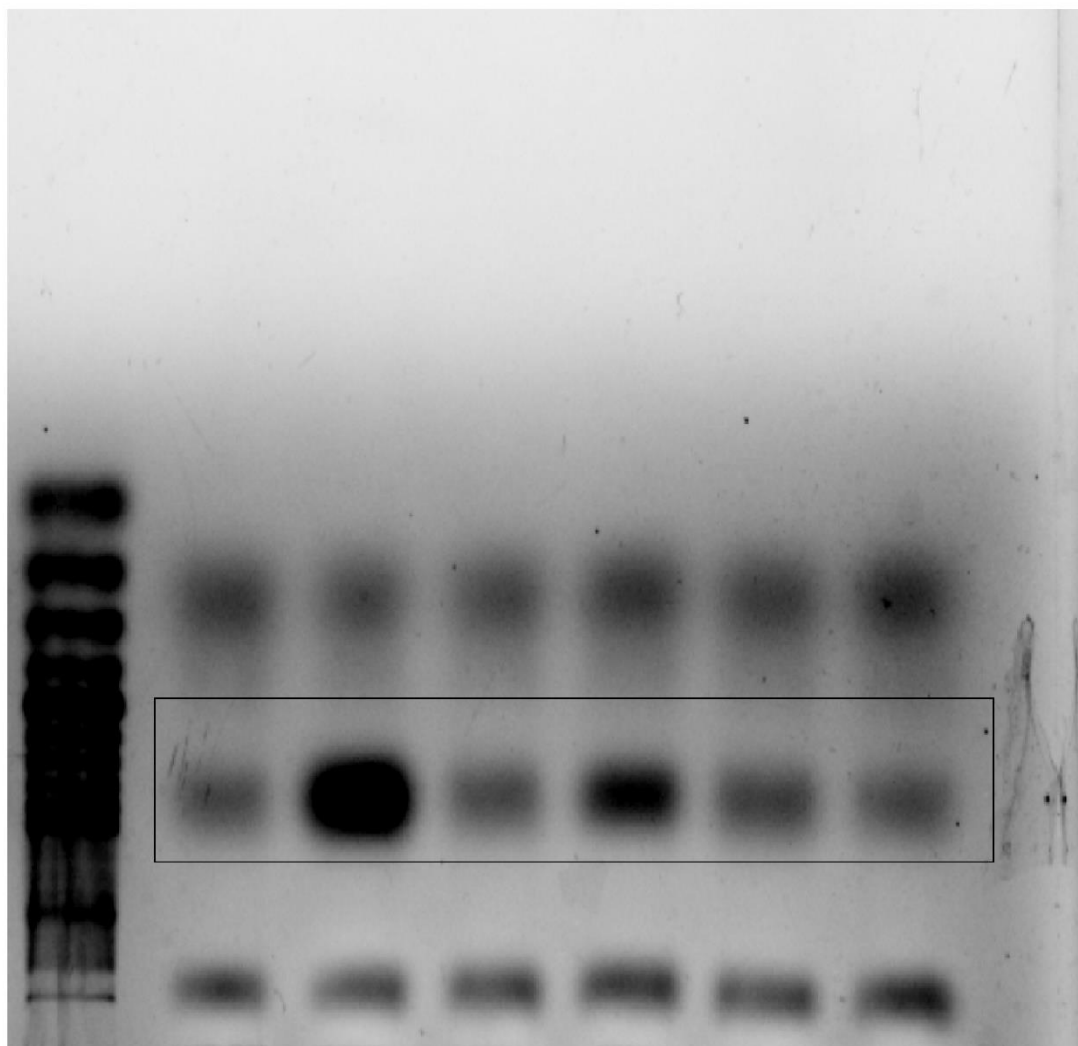## Western uncropped photos

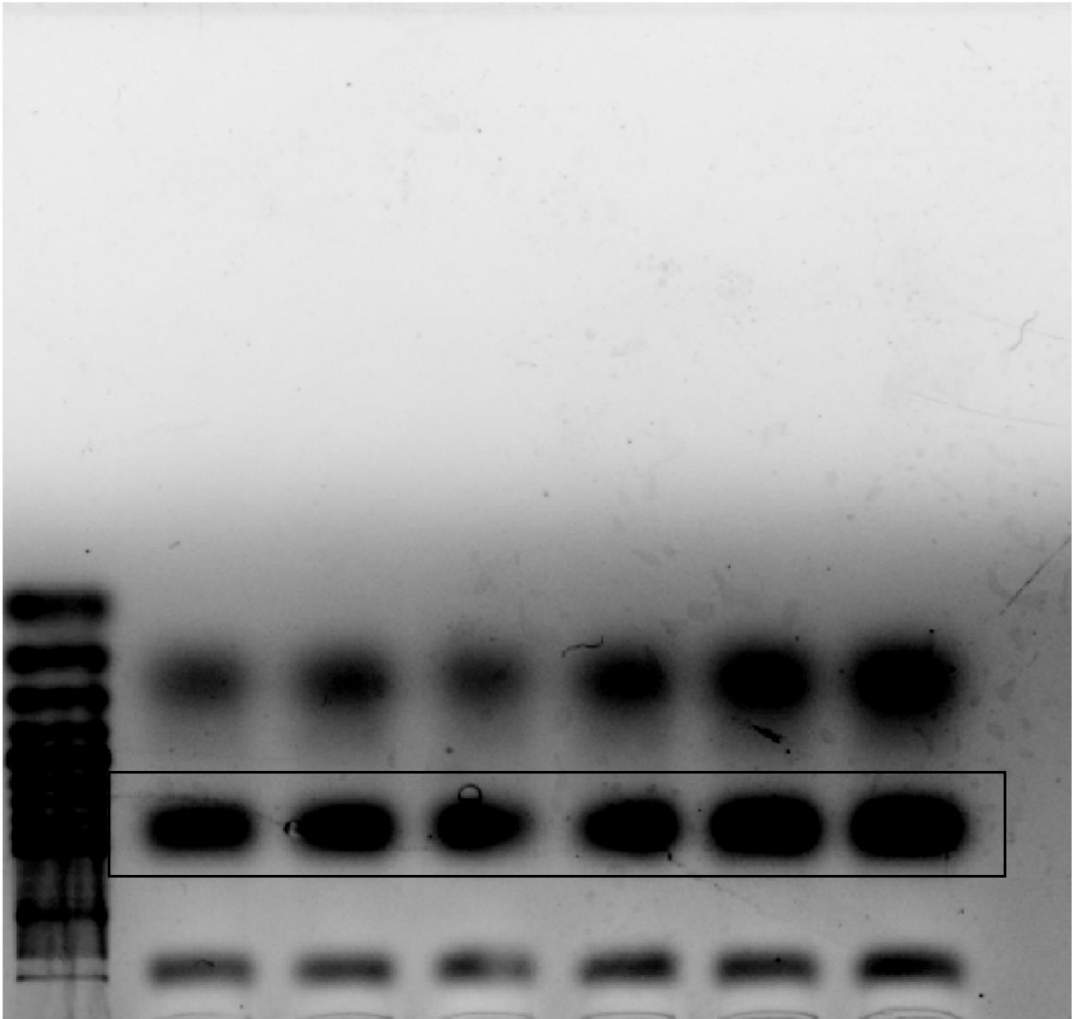**BACE-1**

_p_Y654-β-Catenin

pS9-GSK3-β

NICD

***p*S353-Presenilin**

Total presenilin

β-Actin