Supplementary Figure legends

**Figure S1. Anti-CD73 mAb enhances the activity of anti-PD-1 and anti-CTLA-4 mAbs against RM-1 tumors.** A. Wild type C57Bl/6 male mice were injected subcutaneously with 5 x 10^5 RM-1 tumor cells and treated with control Ig (100 µg ip on days 0, 4, 8, 12), anti-CD73 mAb (100 µg ip on days 0, 4, 8 and 12) and/or anti-CTLA-4 mAb (100 µg ip on days 0, 4) (100 µg ip). B. Same as A, except that mice were treated with control Ig, anti-CD73 mAb and/or anti-PD-1 mAb (100 µg each injected i.p) on days 4, 8, 12. *: p < 0.05 by Mann-Whitney test. Means ± standard errors of 5 mice per group are shown.

**Figure S2. Monotherapy or combined therapy with anti-CD73 mAb requires CD8+ T cells.** Wild type C57Bl/6 mice were injected subcutaneously with MC38-OVA tumor cells (10^6 cells) and treated on day 12, 16 and 20 with i.p. injections of (A) anti-CD73 mAb (100 µg i.p); (B) anti-CD73 and/or anti-CTLA-4 mAbs (100 µg i.p each); (C) anti-CD73 and/or anti-PD-1 mAbs (100 µg i.p each). In some groups, mice were also injected weekly i.p. with T cell depleting anti-CD4 mAb (100 µg clone GK1.5) and/or anti-CD8β mAb (100 µg clone 53.5.8) or control Ig (100 µg clone MAC4). Means ± standard errors of 5 mice per group are shown.

**Figure S3. CD73 expression levels after anti-CD73 mAb therapy.** Wild type C57Bl/6 mice were injected subcutaneously with MC38-OVA tumor cells (10^6 cells) and treated
on day 12 and 15 with intraperitoneal injections of anti-CD73 mAb (100 μg i.p) or control Ig (200 μg i.p). On day 18, tumor single cell suspensions were analysed by flow cytometry. Different anti-CD73 mAbs were used for blockade (clone TY/23) and flow cytometry (TY/11.8). Representative FACS plots are shown.

**Figure S4. Growth rates of carcinogen-induced tumors treated with anti-CD73/anti-PD-1 mAbs.** Tumor growth rates were calculated from data in Fig. 4 by taking tumor growth from first day of treatment to final tumor size (or to zero) and dividing by the number of days. Statistical analysis by ANOVA or Kruskal-Wallis indicated a significant difference (p value <0.0001).

**Figure S5. PD-1 and CTLA-4 expression levels in TILs after anti-CD73 mAb treatment.** Wild type C57Bl/6 mice were injected subcutaneously with MC38-OVA tumor cells (10^6 cells) and treated on day 3, 6, 9 and 12 with intraperitoneal (i.p.) injections of anti-CD73 mAb (200 μg clone TY/23) or control Ig. On day 13, tumor single cell suspensions were analysed by flow cytometry for PD-1 and CTLA-4 expression on TIL populations.