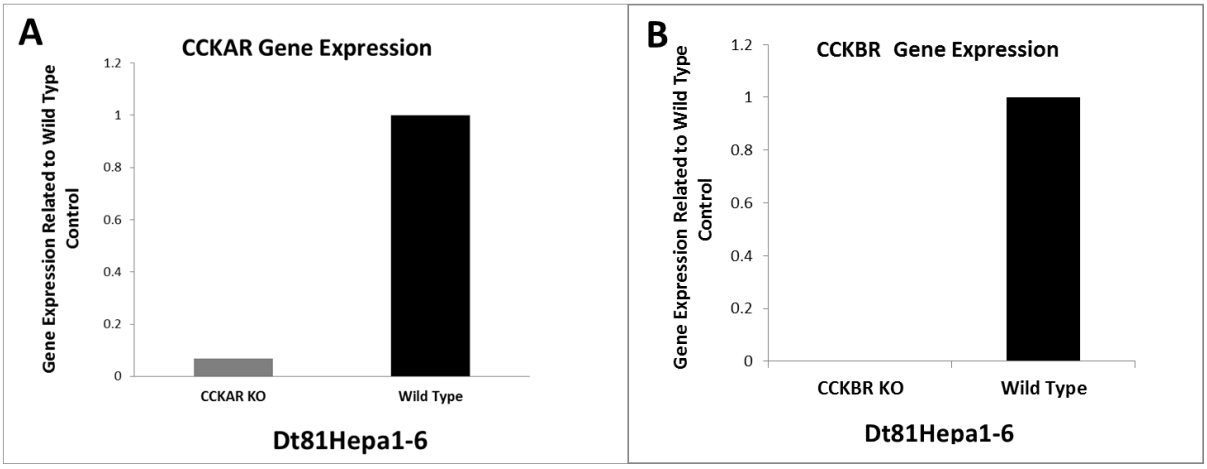
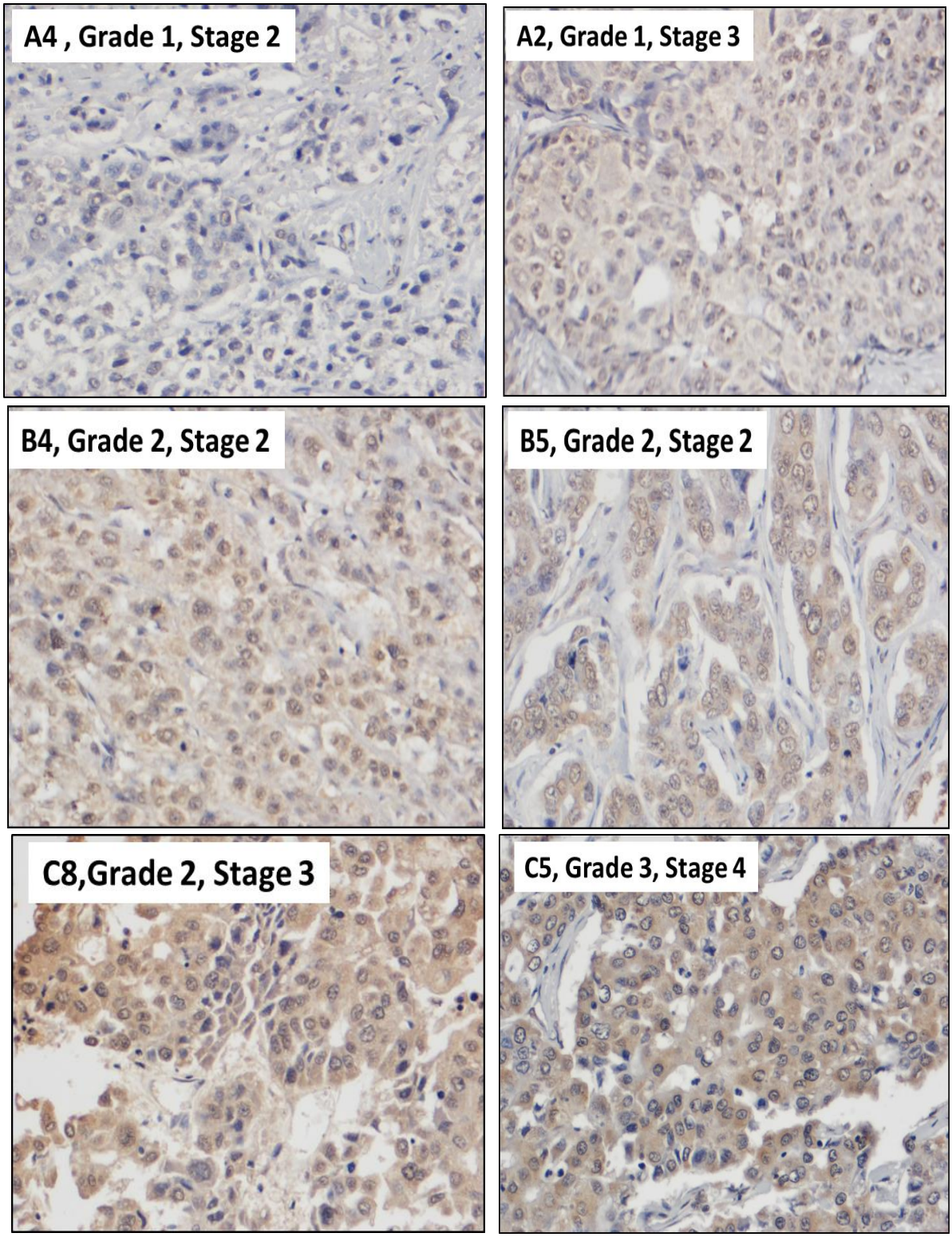
Supplemental Data

Heat Shock Protein (murine)	Forward Primer	Reverse Primer
mHSP27	5'TCAGGCTCAGTGAAGGCAAG	5'GGATAGAGCAGCTCGAACCC
mHSP60	5'TGGGGTCACTGTTGCAAAGT	5" AGATCGTGCCAGAACAGTGG
mHSP70	5' AGGAGGAGTTCGTGCACAAG	5' TCTAGACCACACCGGGAGAG
mHSP90	5' ACAAGCACCTATGGCTGGAC	5' TTGTCTGCCTCAGCCTTCTG
mGST	5' GCACTGACGAGAAGGTGGA	5' TCTGAAGTGCATGAGGGCTG

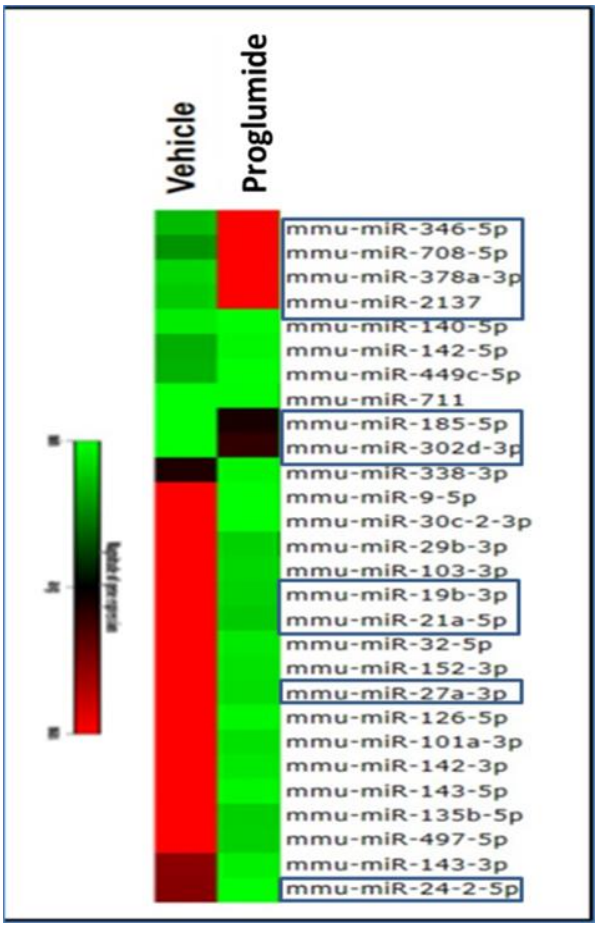
Supplementary Table S1. Oligonucleotide sequences for primers used in qRT-PCR for murine live heat shock protein analysis.



Supplementary Fig.S1. mRNA expression by qRT-PCR of CCK receptors in Dt81Hepa1-6 murine HCC cells after gene editing with CRISPR *Cas9*. **A,** Dt81Hepa1-6 HCC cells are confirmed to have knockout of the CCK-AR when compared to expression in wild type HCC cells. **B,** Dt81Hepa1-6 cells show knockout of the CCK-BR after CRISPR Cas9 compared to wild type cells.



Supplementary Fig. S2. CCK-BR staining by IHC increases with stage and grade of tumor. Representative images all taken at 20X from Biomax Liver tissue array #BC03117, Corresponding tissues per location on the array are shown on each figure along with the grade and stage of tumor.



Supplementary Fig. S3. Proglumide therapy in the mouse leads to changes in miRNA expression profile. Differential expression of multiple miRNAs between the proglumide treated and untreated vehicle control were identified using a 380 miRNA qPCR-based array. Selective miRNAs that are enclosed in a box are involved with regulation of fibrosis, inflammation, or carcinogenesis.