Supplemental Figure S1. STAT5AB, p-STAT5<sub>Tyr<sup>694</sup></sub> and p-STAT3<sub>Tyr<sup>705</sup></sub> protein expression in Stat5ab<sup>+/+</sup>, Stat5ab<sup>+/Δ</sup> and Stat5ab<sup>Δ/Δ</sup> livers with and without GH treatment. Western blot depicting STAT5AB, p-STAT5<sub>Tyr<sup>694</sup></sub> and p-STAT3<sub>Tyr<sup>705</sup></sub> expression in Stat5ab<sup>+/+</sup> (n=2), Stat5ab<sup>+/Δ</sup> (n=2) and Stat5ab<sup>Δ/Δ</sup> (n=2) livers with and without GH treatment.
Supplemental Figure S2. Determination of JUNB protein levels in T cell lymphomas. A Western blot of JunB expression in JunB<sup>+/+</sup>, JunB<sup>+/Δ</sup> and JunB<sup>ΔΔ</sup> T-cell lymphomas. B T-cell lymphomas stained by IHC for JUNB. JUNB positive cells are stained in red (AEC). Nuclei are counterstained with hematoxylin. Scattergramms show the results from the analysis with HistoQuest™. The background levels were determined in JunB<sup>ΔΔ</sup> tumors and the cut-off was set at 15 mean intensity units. C Whisker-box blot from the data generated in (B). The box indicates the interquartile range; the horizontal line in the box depicts the median; whiskers indicate the data range. 3592 JunB<sup>+/+</sup> cells, 2805 JunB<sup>+/Δ</sup> cells and 2208 JunB<sup>ΔΔ</sup> cells were analyzed in total. One-way ANOVA testing proved that the measured differences were of high significance (p<0.0001).
**Supplemental Figure S3.** Scoring of nuclear STAT5AB in human HCC samples by two pathologists and the image analysis software. **A** Matrix for the conversion of the mean intensity (MI) values obtained from image analysis into the scoring values 0, 1, 2 and 3. **B** Evaluation of 22 human HCC samples for nuclear STAT5AB intensity based on the 0, 1, 2, 3 scoring system. The detected nuclear mean intensities (MI) of HistoQuest™ are listed. The scorings of the two pathologists are displayed before and after software-assisted re-evaluation. Revised scoring values compared to the first evaluation are labeled in red. **C** Numbers of scoring matches in the collective of 22 HCC samples between the pathologists and HistoQuest™ software are depicted.
Supplemental Figure S4. **STAT5AB IHC on human HCC specimens used for the evaluation study.** Representative microscopic pictures of 22 human HCC samples, which were stained for STAT5AB expression by IHC to evaluate nuclear STAT5AB levels.