**Supplementary Figure S1**

Quantitative real-time PCR analysis of the expression of the EMT markers *TWIST1* and *TWIST2* in ALDHHI (black bars) and ALDHLO (white bars) cells derived from the endometrial cancer cell lines HEC1A and RL95-2. Asterisks mark statistically significant differences between individual subpopulations.

**Supplementary Figure S2**

FACS analysis of CD133 expression in the endometrial cancer cell lines HEC1B, HEC1A, RL95-2, and IK. While CD133-stained HEC1B, HEC1 and RL95-2 cells appear to entirely overlap with the isotype control (CD133-), IK cells are almost entirely CD133+.

**Supplementary Figure S3**

**A.** Growth analysis of ALDHHI and ALDHLO HEC1A cells cultured for 3 days in control medium and in the presence of Cisplatin (50 and 100 μM). Cell growth was measured by MTT read at O.D. 490. Cisplatin resistance is mainly associated with the ALDHHI fraction. Time zero (T0) was 27 hrs. after sorting. To compensate for differential growth of the two fractions and to ensure comparable MTT values at T0, ALDHLO cells were seeded at higher density (3.5\*104/well) than ALDHHI cells (2.25\*104/well). The graph is representative of three independent experiments.

**B.** Growth analysis of bulk HEC1A cells in the presence of Cisplatin and IL6 pathway inhibitors (anti-CD126 Ab, Ruxolitinib, and Nifuroxazide) as single agents. Cells were seeded at 2.0\*104/well and the treatments were started 20 hrs. later. MTT analysis was performed after 3.5 days. The histograms represent the average ±SD from 2 independent experiments performed in parallel, each in duplicate. The baseline (depicted in red) was drawn based on the T0 value. Different degrees of growth inhibition are observed with all the agents with the only exception of Ruxolitinib at 12 µM.

**C.** Combinatorial treatment with Cisplatin and IL-6 signaling inhibitors. Bulk HEC1A cells were first treated for 3.5 days and measured by MTT (left panel). The histograms the percentage increase/decrease when compared with the T0 value (red line) as calculated in B. All cells were subsequently washed, grown in control medium for 3 weeks, and again measured by MTT (right panel). For the sake of simplicity, only the most relevant combinations, with respect to the definition of cooperative toxicity, are shown.