Supplementary Figure 1. AKT1 promoter (2000 bp) : The AKT1 promoter sequence (- 2000 to – 0) is shown with the positions of the putative p63 transcription factor consensus sequences. The region and the primers that were used for the ChIP-PCR amplification and the probe sequences used for gel-shift assay.

Supplementary Figure 2. ΔNp63α and AKT1 mRNA and protein levels in H1299, human large cell lung carcinoma cells after CDDP exposure. **(a-b).** Immunoblotting and semi-qRT-PCR for AKT and ΔNp63α after time dependent (0-24h) CDDP exposure (25μM) in ΔNp63α-null H1299 cells, with (b) or without (a) ΔNp63α transfection. **(c).** Immunoblotting and semi-qRT-PCR for AKT1 and ΔNp63α in the H1299 cell line after transfection with different doses (0 to 1.5μg) of ΔNp63α. (d, upper section). Immunoblotting and semi-qRT-PCR for AKT1, ΔNp63α and TAp63α in JHU-022 cell lines after transfection with TAp63α followed by ΔNp63α, TAp63α, AKT1 and control siRNAs transfection after 24h. Cells were harvested after 72h post transfection. (d, lower section). Immunoblotting and semi-qRT-PCR was done for AKT1 and ΔNp63α in JHU-022 cell lines after AKT1 siRNA transfection.

Supplementary Figure 3. ΔNp63α and AKT1 expression in tumors sensitive or resistant to platinum therapy.

(a). Real-time PCR assays were done to test expression of ΔNp63α and AKT1 in tumor tissue samples from patients with the CDDP-sensitive and CDDP-resistant ovarian tumors (serous papillary carcinoma, stage 3, grade 3, carboplatin/taxol regimen). Each sample was run in triplicate. For quantification, the expression level of each gene was calculated relative to GAPDH expression, using the formula $2^{-\Delta Ct}$, where ΔCt = average $Ct_{AKT/\Delta Np63\alpha}$ − average Ct_{GAPDH} $[2^{-(\text{cycle number of tested gene} - \text{cycle number of ß-actin})}]$. Graphs represent mean±SD of three separate experiments performed in triplicate. All tissues were harvested before chemotherapy and clinical results followed standard criteria for sensitivity following 2 cycles of single agent platinum treatment.

(b). We studied *P63* copy number in a pair of isogenic ovarian cancer cell lines, CDDP-sensitive (OV2008) and CDDP-resistant (OV2008 C13), and in 7 ovarian cancer samples (serous papillary carcinoma, stages 3 and 4, grades 3-8, cisplatin/taxol, carboplatin/taxol, carboplatin/

topotican/ taxol, carboplatin/gemcitabine/taxol, carboplatin/taxol/ taxotere regimens; 5 classified as sensitive and 2 - as resistant to platinum/taxol treatment). The copy number assays: *P63* (Hs06696759_cn) and RNAse P (4403326) were obtained from Applied Biosystems. They were run simultaneously as a duplex, real-time PCR reaction in a 7900HT sequence detector (Applied Biosystems) and analyzed with the CopyCaller software. This software performs relative quantitative analysis of the genomic DNA target (*P63*) and the reference assay (sequence known to exist in two copies in a diploid genome -the *RNase P H1* RNA gene. Samples were analyzed in quadruplicate and repeated in two independent experiments. *P63* gene copy number in normal human genomic DNA was set as 2 and copy number of more than 3 was considered as increased, sub-classified as moderately increased when less than 5, and significantly increased when higher than 5.

(c). IHC analysis of ΔNp63 and AKT1 expression in TMA with human squamous cell carcinomas (SCC). 48 primary SCC tumor samples in TMA (#HN483, US-Biomax) were selected as T1N0, T1N1, T2N0, T2N1, T3N0, T4N0, T4N1, and T4N2 stages of the cancer in various head and neck locations (mandible, root of tonque, lower lip, upper jaw, mandibular gingival, lower jaw, larynx, parotid gland, nasopharynx, maxillary sinus). After blocking with normal goat serum, six-micron slides were stained with antibodies against ΔNp63 (1:2000, Ab-1, Calbiochem/EMD) or AKT1 (1:100, B-1, Santa Cruz Biotechnology) for 1h at room temperature. A Vectastain ABC Kit and DAB Substrate Kit (Vector Laboratories) were used to visualize the antibody staining. Only nuclear p63 staining was interpreted as positive. Antibodies were tested by immunoblotting, control peptide (for p63 only). IHC was tested for various dilutions of primary antibodies and for negative no primary antibody control. Results of IHC were designated as + weakly positive (18/8), ++ moderately positive (14/23), and +++ highly positive (10/10) for expression of ΔNp63/AKT1, respectively. Normal epithelial tissue controls showed a relatively low level of ΔNp63/AKT1 expression [-/+(6/3 to + (4/7)].

Supplemental Figure 4. ΔNp63 and AKT 1 levels correlate with CDDP resistance of ovarian cancer. IHC validation of the ΔNp63/AKT1 functional relationship in head and neck (A) and ovarian (B) cancer biopsies. Biopsies from patients with head and neck cancer (T1N1 and T2N1) and ovarian cancer (serous papillar carcinoma, stage 3, grades 3 and 6) sensitive and

resistant to CDDP (carboplatin/taxol regimen) were procured from the Department of Pathology at the JHMI. Fresh tumor biopsies were surgically resected and stored at -80^{o}C for subsequent analysis. Six-micron sections from the paraffin tissue blocks and the slides were dried at 60^{o}C for 30 min, treated with xylens, and then dehydrated in alcohol. Endogenous peroxidase was blocked with 0.3% H_2O_2. After blocking with normal goat serum, the slides were incubated with the polyclonal antibody to ΔNp63 (1:2000, Ab-1, Calbiochem/EMD) and the monoclonal antibody to AKT1 (1:100, B-1, Santa Cruz Biotechnology) for 1h at room temperature. A Vectastain ABC Kit and DAB Substrate Kit (Vector Laboratories) were used to visualize the antibody staining. Only nuclear p63 staining was interpreted as positive, while AKT1 stained both nucleus and cytoplasm. As negative control, we used the Vectastain ABC staining alone without primary antibodies. Specificity of antibodies was tested by various dilutions, immunoblotting and blocking with a peptide (for ΔNp63, ref. 13). 200x magnification.

Supplemental Figure 5. IHC analysis of ΔNp63 and AKT1 expression in TMA with human ovarian cancers. 24 double ovarian tumor samples (borderline ovarian cancer, serous-papillary carcinoma, endometroid cancer, transitional cell carcinoma, clear cell carcinoma, and Brenner tumor) on TMA (#OV481, US-Biomax) were subjected to IHC, as described in Suppl. Fig.3C. Results of IHC were designated as + weakly positive (2/4), ++ moderately positive (15/14), and +++ highly positive (7/6) for expression of ΔNp63/AKT1, respectively. Duplicates showed 90% correlation. Normal epithelial tissue controls showed a relatively low level of ΔNp63/AKT1 expression [-/+(1/1 to + (1/1)].