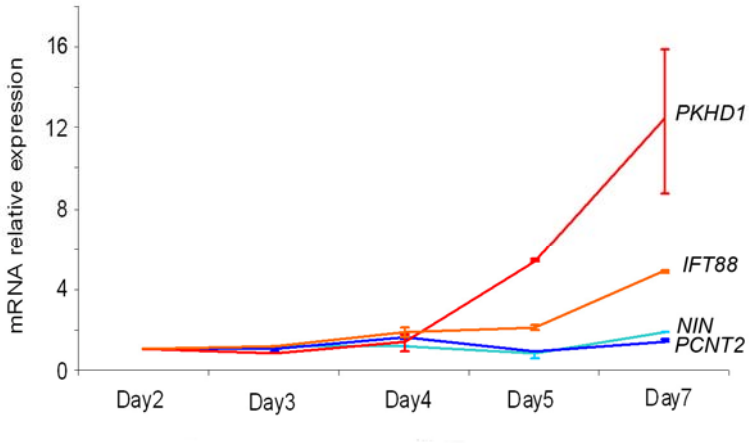
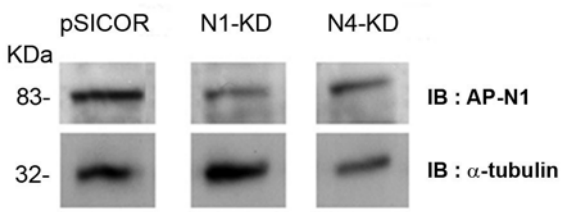
**Supplementary Table:** **Oligonucleotide primers for real-time RT- PCR.**

| Gene | Specie | Forward | Reverse |
|---|---|---|---|
| *NPHP1* | canine | AGCAGGAGGGGAAGAAGT | TGGAAGAGTGTGGAAGGC |
| *INVS/NPHP2* | canine | CATGAAGTGATCCAGTTCATGTTG | GGCGGCGATGTCCTGTAT |
| *NPHP3* | canine | TCTCTGTGGAGTAACGCTGTCA | ATCCCATTGTCTCACACATTC |
| *NPHP4* | canine | ATAGTTCGCTGGGCTGTT | CTGGCAGGGGTTACTTTA |
| *NPHP4* | human | CCGTGTCACCTTGGAAGT | CCACAGTCAGGCAGAGCA |
| *CEP290/NPHP6* | canine | ATGGAGCGACAGCTTAGGAA | TAAATCGTTGCAAACGTCCA |
| *GLIS2/NPHP7* | canine | GCCAAGTGTAACCAGCTCTTTGA | CCCTCCCAGTGACAGCAGTAC |
| *RPGRIP1L/NPHP8* | canine | TTGAAGCAGTGACCCAGAAGA | TGGTGCCATAGGCAATATCCT |
| *NEK8/NPHP9* | canine | GGTGCCTTCGGGATTGTG | CCACTGGGATCTGCTTGATGA |
| | | | |
| *PCNT2* | canine | AGGCTTCAGGAAAGCTCTGATTTATC | GTGGTCGTCTTCTTATCAGCTTTG |
| *NIN* | canine | CCATCTGCATCTACGCCATACA | CGAAAGCCAATGGTACTTGTCA |
| *PKHD1* | canine | TGAAATACACTCAGGTGTCTCT | CAGGCATCTCATGAATAAACC |
| *IFT88* | canine | GATGGGAAGACCAATGACAGGG | TCAAATGCAGAGCCTCTCAA |
| | | | |
| *GAPDH* | canine | AAGGTAGTGAAGCAGGCA | GGTGGAAGAGTGGGTGTC |

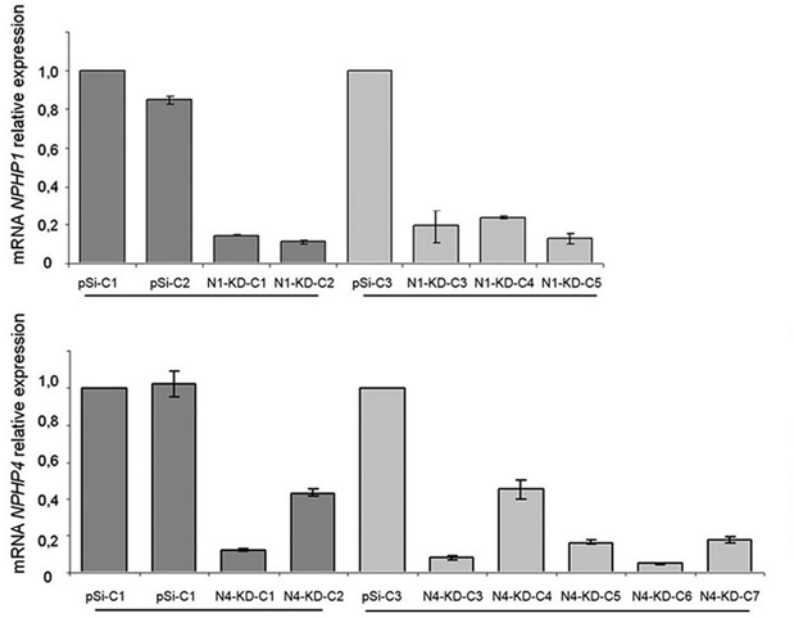



**Suppl. Figure 1**: **Expression analysis of centrosomal and ciliary genes during cell polarization**. Quantitative RT-PCR analysis of centrosomal genes (*NIN*, encoding ninein and *PCNT2*, pericentrin) and ciliary genes (*PKHD1* and *IFT88*) during time-course experiments performed on MDCK cells.

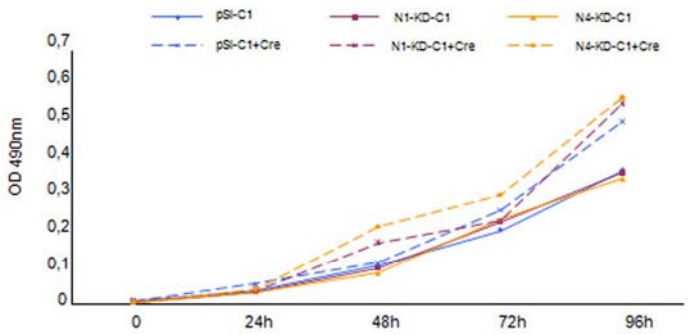
A



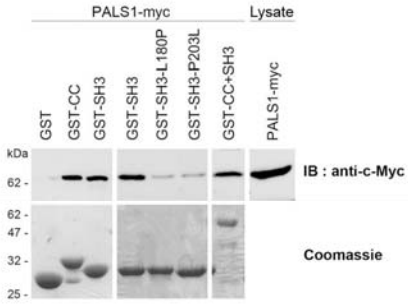

B



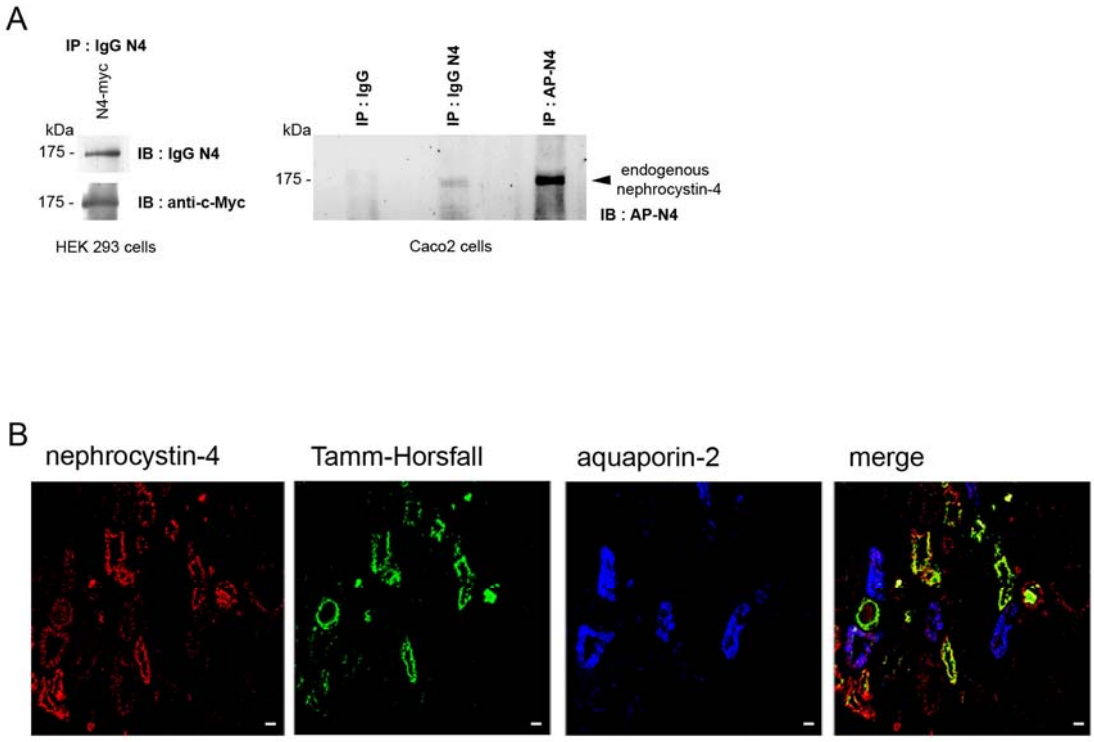

**Suppl. Figure 2: Analysis of *NPHP1* and *NPHP4* expression in polyclonal and clonal knockdown cell lines.** **(A)** Western blot analysis of nephrocystin-1 expression level in polyclonal control pSICOR, N1-KD and N4-KD cell lines. **(B)** Quantitative RT-PCR analysis of *NPHP1* and *NPHP4* gene expression in control (pSi-C1 to 3), *NPHP1* knockdown (N1-KD-C1 to 5) and *NPHP4* knockdown (N4-KD-C1 to 7) clones, respectively. As clones were selected in two independent experiments, the clones which are compared are underlined.




**Suppl. Figure 3:** ***NPHP*** **knockdown cells have no defect in cell proliferation.** Control and *NPHP*-depleted cells ($5.10^3$ cells), before and after Cre infection, were seeded in triplicate in 96-well plates. At each time point, number of cells was quantified using CellTiter 96® Aqueous Cell Proliferation Reagent (Promega) following the manufacturer's instructions and OD490nm was measured using a spectrophotometer microplate reader (Thermolab systems).




**Suppl. Figure 4**: **Nephrocystin-1 interacts with PALS1 via its coiled-coil and SH3 domains.** *In vitro* pull down assay of PALS1-myc expressed transiently in HEK293T using GST fusion protein of the CC (GST-CC) and SH3 domains (GST-SH3) of nephrocystin-1 and GST alone. Bound protein was revealed with anti-c-Myc antibody and coomassie staining revealed the amount of GST fusion proteins used.




**Suppl. Figure 5: Characterization of the mouse monoclonal anti-nephrocystin-4 antibody.** **(A)** Immunoprecipitation of overexpressed (N4-myc, left panel) or endogenous nephrocystin-4 (right panel) protein with mouse monoclonal (IgG N4) or rabbit polyclonal (AP-N4) anti-nephrocystin-4 antibody in HEK293 cells and caco2 cells, respectively. **(B)** Co-labelling of human kidney section with IgG N4, anti-Tamm-Horsfall (Argen) (thick ascending loop of Henle and distal tubules) and anti-aquaporin2 (Santa Cruz) (collecting ducts) antibodies. Scale bars are 20µm.