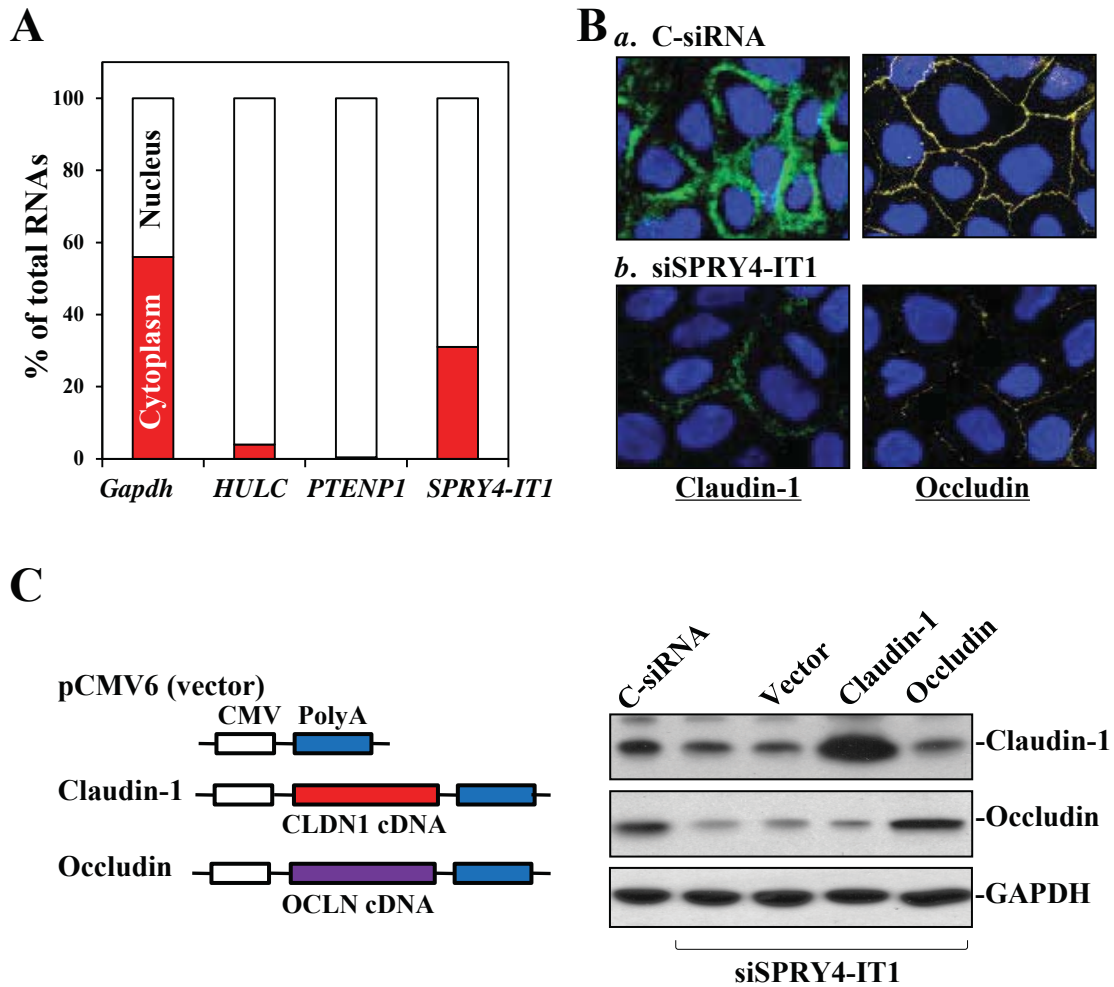
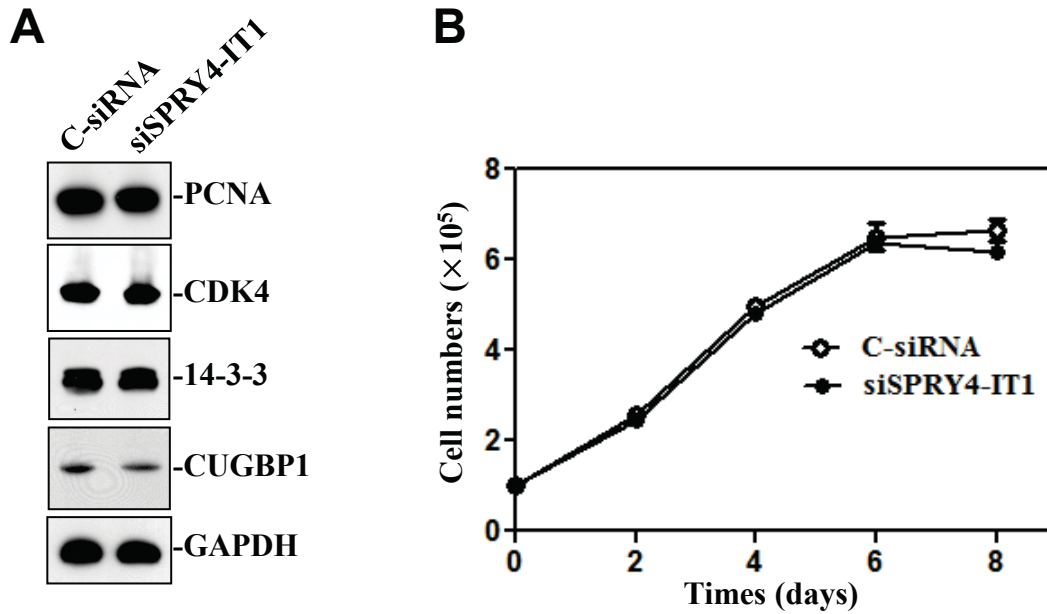


Supplemental Materials

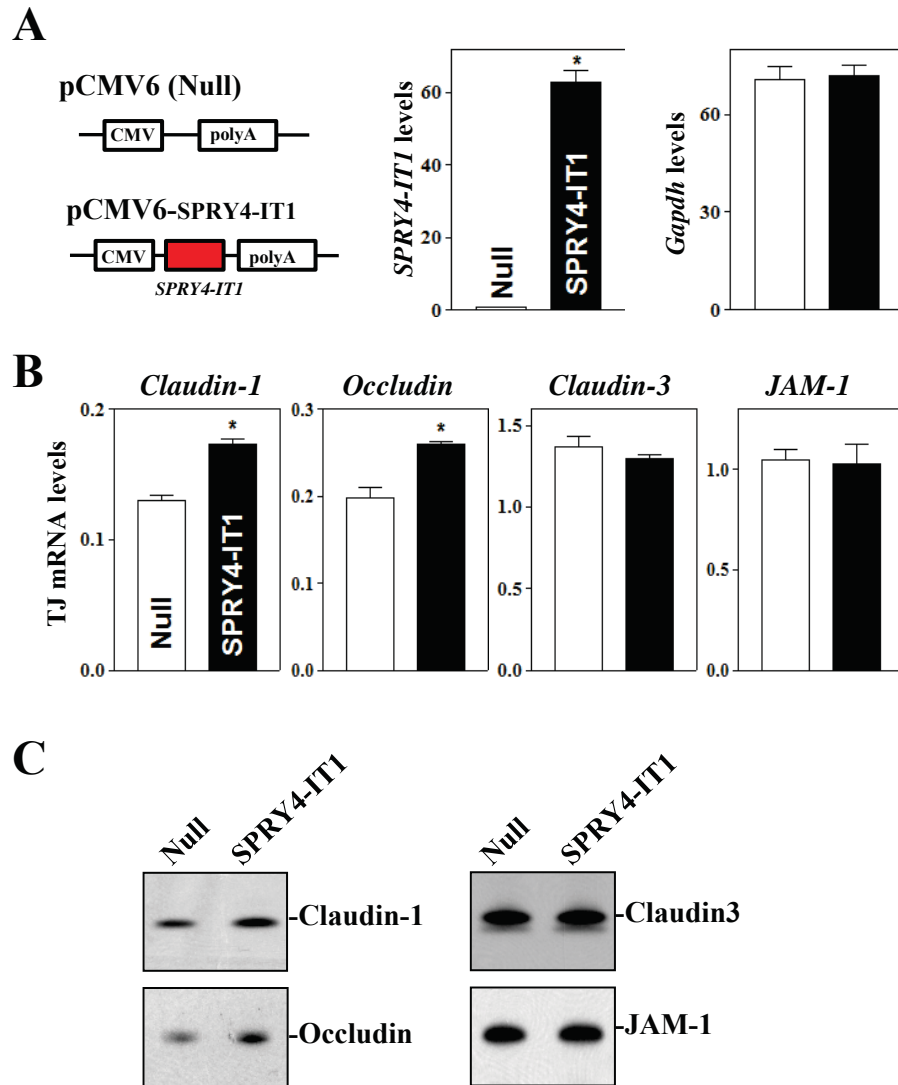
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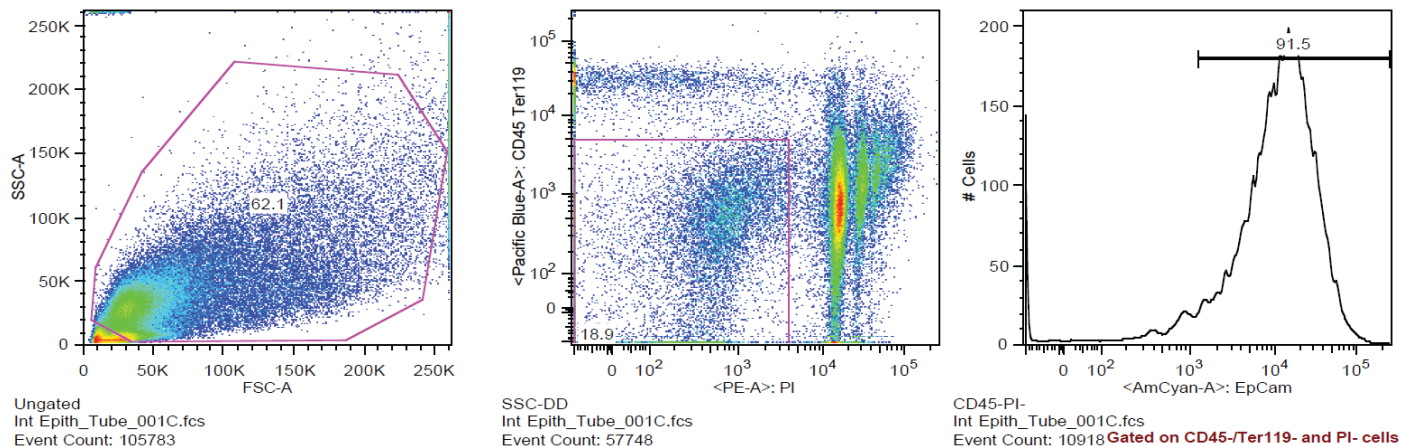




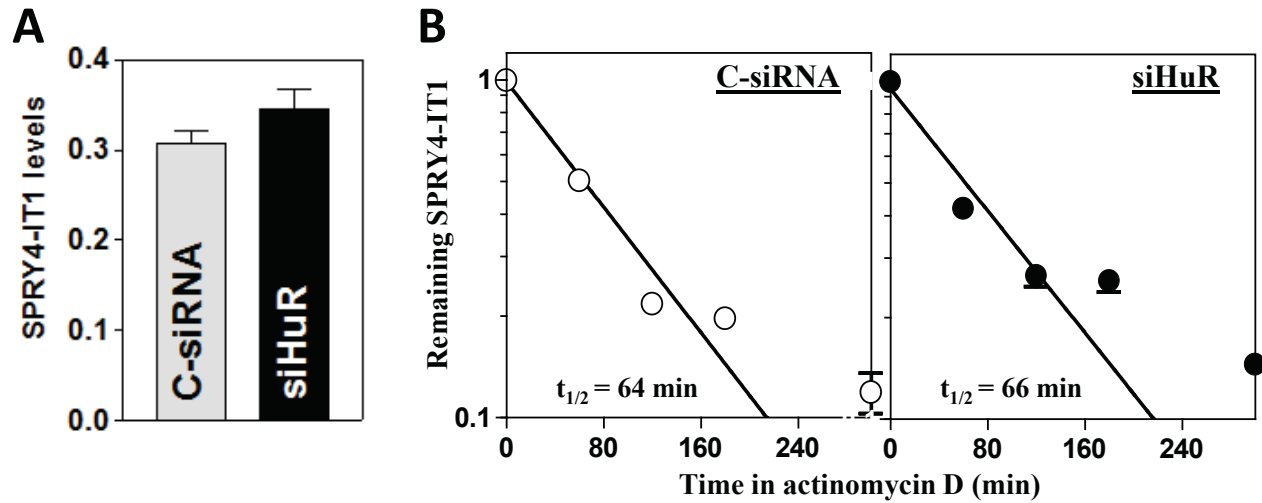
Supplementary Figure 2. Effect of SPRY4-IT1 silencing on Caco-2 cell proliferation. A) Representative immunoblots of PCNA (proliferating cell nuclear antigen), CDK4 (cyclin-dependent kinase 4), 14-3-3, and CUGBP1 (CUG-binding protein-1) proteins in Caco-2 cells 48 h after transfection with siSPRY4-IT1 or C-siRNA. B) Cell numbers at different times after transfected with siSPRY4-IT1 or C-siRNA. Values are the means \pm SEM ($n = 6$).



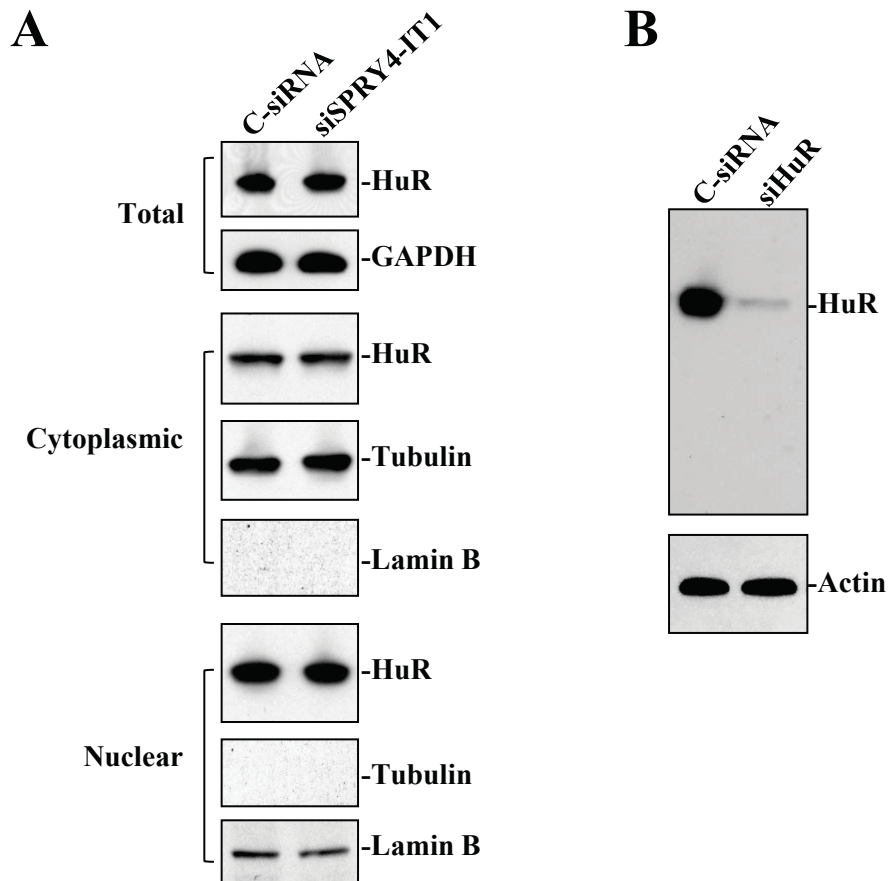
Supplementary Figure 3. Ectopic overexpression of SPRY4-IT1 on TJ expression in Caco-2 cells. **A)** *SPRY4-IT1* levels 48 h after transfecting cells with the *SPRY4-IT1* expression or control (null) vector. Values are means \pm SEM from three separate experiments. * $P < 0.05$ compared with Null. **B)** Changes in the levels of TJ mRNAs in cells described in **A**. **C)** Representative immunoblots of TJ proteins in cells described in **A**.



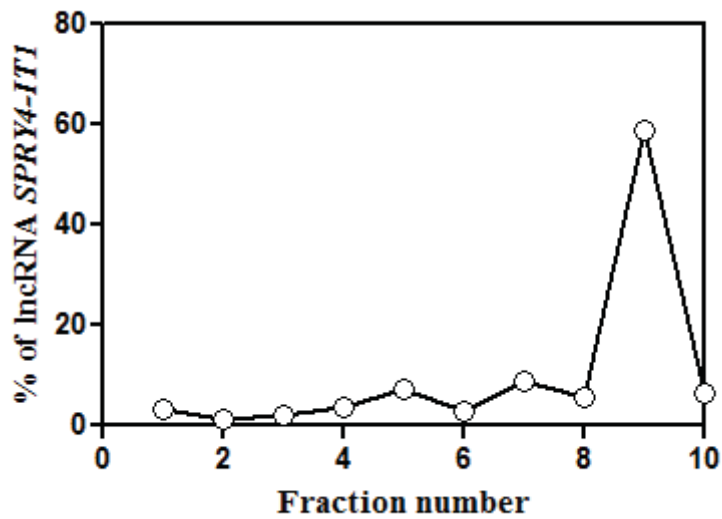
Supplementary Figure 4. Population of IECs in the extracted tissue as measured by fluorescence-activated cell sorting analysis. The small intestinal mucosa was scraped from the underlying smooth muscles using a glass microscope slide and incubated in stain buffer (BD biosciences) containing FBS and 0.5 mM EDTA for 15 min at 37°C. Cells were filtered with a 70- μ m cell strainer (BD biosciences) and blocked with Fc Block (2.4G2) for 5 min at room temperature, followed by incubated with antibodies and other reagents for 30 min 4°C. Dead cells were identified and excluded after staining with propidium iodide (PI). The epithelial cell fraction was defined by PI-CD45-TER119-EpCAM⁺ gating. Samples were analyzed by using a BD LSR II Flow Cytometer System. Experiments were repeated six times and showed similar results.



Supplementary Figure 5. Effect of HuR silencing on SPRY4-IT1 content and its stability. **A)** Levels of *SPRY4-IT1* 48 h after transfection with siHuR or C-siRNA. Values are means \pm SEM from three separate experiments. **B)** Stability of *SPRY4-IT1* in cells described in **A**. The levels of *SPRY4-IT1* were examined at different times after administration with actinomycin D.



Supplementary Figure 6. Effect of SPRY4-IT1 silencing on cellular HuR abundance and HuR levels after transfection with siHuR. **A)** The levels of total, cytoplasmic, and nuclear HuR were examined 48 h after cells were transfected with siSPRY4-IT or C-siRNA. Three separate experiments showed similar results. **B)** HuR levels in cells transfected with siHuR or C-siRNA for 48 h.



Supplementary Figure 7. Distribution of *SPRY4-IT1* in each gradient fraction prepared from polysomes isolated from Caco-2 cells. Total RNA was isolated from different fractions, and the levels of *SPRY4-IT1* were measured and plotted as a percentage of total *SPRY4-IT1* levels in each sample.

Supplementary Table 1: Sequence alignments with highest score between *SPRY4-IT1* and TJ mRNAs

Score	Expect	Identities	Gaps	Strand
21.1 bits	1.0	11/11(100%)	0/11(0%)	Plus/Plus

SPRY4-IT1 24 TTGGTCAGGCT 34
 CLDN1 722 TTGGTCAGGCT 732

Score	Expect	Identities	Gaps	Strand
107 bits	2e-26	97/120(81%)	3/120(2%)	Plus/Plus

SPRY4-IT1 2 TAGAGATGGGGGTTTCATCCTGTTGGTCAGGCTGGTCTTGAACCTCCTGACCTCAAGTGAT 61
 OCLN 3452 TAGAGACGGGGTTT-ACCATAGTGGCCAGGTGGTCTTGAACCTCCTGACCT--TGTGGT 3508
 SPRY4-IT1 62 CTGCCTACCTTGGCCTCCCAAAGGCTGAGATTACAGGCATGAGCCACTGCGCCAGGCct 121
 OCLN 3509 CTGCCTGCTCGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCATGCTGCGCCT 3568

Score	Expect	Identities	Gaps	Strand
19.3 bits	1.4	13/15(87%)	0/15(0%)	Plus/Plus

SPRY4-IT1 624 CTGAGCATTGCCCAT 638
 CLDN3 290 CTGCGCGTTGCCCAT 304

Score	Expect	Identities	Gaps	Strand
107 bits	1e-26	97/120(81%)	3/120(2%)	Plus/Plus

SPRY4-IT1 1 GTAGAGATGGGGGTTTCATCCTGTTGGTCAGGCTGGTCTTGAACCTCCTGACCTCAAGTGA 60
 JAM-1 3439 GTAGAGACAGGG-TTTCACCATGTTGGTCGGGCTGGTCTCAAACCTCCTGACCTC--TTGA 3495
 SPRY4-IT1 61 TCTGCCTACCTTGGCCTCCCAAAGGCTGAGATTACAGGCATGAGCCACTGCGCC 115
 JAM-1 3496 TCCGCCTGCCTTGGCCTCCCAAAGTGATGGGATTACAGATGTGAGCCACCGTGCC 3550