Targets	Primer Sequences (5'→3')	Expected size of product (bp)	PCR annealing temperature (°C)	Number of cycles
CD133	sense: TGGCAACAGCGATCAAGGAGAC	633	60	30-32
	antisense: TCGGGGTGGCATGCCTGTCATA			
GAPDH	sense: CTCATGACCACAGTCCATGC	489	58	30
	antisense: TTACTCCTTGGAGGCCATGT			
ETS1	sense: GCATGCCCAGTGTGTTCCAC	483	63	30
	antisense: AGGGCAGCAGCAGGAATGAC			
ETS2	sense: GCCAGTCGTCCTTGCTGGAT	490	63	30
	antisense: AGGATGGCGTGCAGTTCCTC			
ELK1	sense: GTGAGCGGCCAGAAGTTCGT	497 63	35	
	antisense: CCCAAACCCGGCTCCACATTA			
ELK3	sense: ATTCCCTGCAGAACCCACCA	427	63	30
	antisense: GCCTTTGGGGGAAGAGATGG			
ELK4	sense: AACTCAGCCGAGCCCTCAGA	428	63	30
	antisense: CGGTGGCTTTTTGGAAGGTG			
ELF1	sense: CATGGTTGTTGCCCCAGTCA	464	63	30
	antisense: CCAAGCGCTGACCTTCCACT			
ELF2	sense: TCCAACAACAGCGACCTCTCC	457	63	30
	antisense: AGCTGAAGGCGCACTGACAA			
ESE1	sense: GCCCCAGTTCTGGTCGAAGA	477	63	30
	antisense: GTGGGATCCAGGTCCACGTC	411		
ELF4	sense: TGGACCCAGCGAGAGAAAGG	465	63	30
	antisense: TGCTGGAGAGACGAGCATGG	400		00
ESE2	sense: GGGAGTGGCTCCAGTTCTGC	465 63 429 63 430 63	30	
	antisense: TTGCCAGGGCTTCCGATTTA	425		00
ER81	sense: TCATGGCCTGCCACTGAAAA	430 63	63	30
	antisense: TGGTGGGAAGGGGATGTTTG	450	03	50
ER71	sense: TGCACAGCCTGGGACTCTTG	448 63	35	
	antisense: GCCACAGCTGAATGGGACCT	440	65	55
PEA3	sense: CCCCTGGACATTTGCCACTC	426	62	20
	antisense: AAATGCACCGACCCCTTCCT	420	03	50
ERM	sense: CCCCTTACCAGAGGCGAGGT	402	62	20
	antisense: AGGAGGTAAGCGGGGCTGTC	405	03	50
TEL	sense: GAGCGCTCAGGATGGAGGAA	428	63	30
	antisense: GCGGTGCAACAGTTCAATGG	420	03	50
ETV7	sense: CCCACCCAGCACTCTCCAGT	498	63	30
	antisense: GAGTTTCTGCCCCGGTTCCT	450	00	50
ERG	sense: ATCACCTGGGAAGGCACCAA	494	62	20
	antisense: TATGGCTGGTGGGGAGCCTA	424	05	30
FLI1	sense: GCGAGTCCAACCCCATGAAC	411	62	20
	antisense: TGCCCCAAGCTCCTCTTCTG	411	03	30
FEV	sense: AAAGGCAGCGGACAGATCCA	405	63	25
	antisense: GCGGCCATGAGGTTGAGTTT	420		
GABPA	sense: ACGCGCCAGCTGAATGTGTA	416 63	60	20
L	antisense: CAGTGCAGCAGCCCATCTTG		30	
EHF	sense: CCGGCAACAACCTCCTTCAC	416 63 478 63	20	
	antisense: GAGATCTGAGCCCGGCAGAA	470	00	30

Figure S1. Oligonucleotide primers and PCR conditions used for RT-PCR analysis



Β

EBS1:	-62	ATCAGGCA GGAA GGGTAGAATGCTG	-38
mEBS1:	-62	ATCAGGCA <u>TT</u> AAGGGTAGAATGCTG	-38
EBS2:	-42	TGCTGGGACA GGAA GTAGCTTGGAG	-18
mEBS2:	-42	TGCTGGGACA <u>TT</u> AAGTAGCTTGGAG	-18
Cons. EBS:		GGGCTGCTTGA GGAA GTATAAGAAT	
-25/-1:	-25	GCTTGGAGGTGGGCCTTAGGCTGGT	-1

Figure S2. Nucleotide sequence of CD133 P5 -98/+10 region and EMSA probes

A. Nucleotide sequence between -98 to +10 of CD133 P5 region. Two Ets binding sites (EBS#1 and EBS#2; GGAA) are showed in bold letters. The oligonucleotides corresponding to positions -62 to -38 and -42 to -18 were used in the EMSA experiment as probes EBS1 (underlined) and EBS2 (dot-underlined). **B**. Sequence of oligonucleotides used in EMSA experiment. Ets core sequence GGAA is substituted by TTAA in mEBS1 and mEBS2. Cons. EBS is a consensus Ets binding sequence derived from the human erbB2 promoter [34]. Nucleotide sequence between -25 to -1 of CD133 P5 region was used as a negative control without GGAA (-25/-1).



Figure S3. mRNA expression of ETS family genes in Caco-2 and Fuji cells Primer sequences and PCR conditions are shown in Additional file 1, Figure S1. Fuji cells with high level of CD133 (CD133high) were enriched by MACS.



Figure S4. Effect of U0126 on the expression of CD133 mRNA in Caco-2 cells Cells were incubated with DMSO or U0126 for 72 hours, and the expression of *CD133* transcripts containing exons 1A, 1B, 1C, 1D and 1E were analyzed. PCR amplification was performed using five forward primers located in each of the exon 1s and reverse primer located in the common exon 2 of *CD133* gene. The number of PCR cycle was 25 for total *CD133*, 30 for *exon 1A* and *1B*, and 40 for *exon 1C, 1D*, and *1E*, respectively. *GAPDH* is an internal control.



Figure S5. CD133 protein expression in NHA/TSE2 and NHA/TSR cells FACS analysis was performed using CD133/2-PE antibody. The gray region represents a staining with CD133-PE antibody, and the dotted red line represents the isotype control antibody IgG2b-PE. CD133-positive cells were not detected.



Figure S6. SP analysis of NHA/TSE2 and NHA/TSR cells

Cells were stained with Hoechst 33342, and its fluorescence was resolved with a Hoechst blue (y-axis) and Hoechst red (x-axis). Red boxes are defined as SP fractions with low intensity of Hoechst staining. SP cells were visible in only NHA/TSE2 cells.





Figure S7. Effect of CD133 expression on soft-agar colony formation activity of NHA/TS

NHA/TS cells infected with retroviral vectors encoding CD133 (NHA/TSC) were established (\mathbf{A}), and subjected to soft-agar colony formation assay (\mathbf{B} and \mathbf{C}). Note that NHA/TSR cells were cultured for only 2 weeks, whereas NHA/TS and NHA/TSC cells were cultured for 3 weeks.