

Fig. S1

PCDH8, AAC70009

1 MSPVRRWGSP CLFPLQLFSL CWVLSVAQSK TVRYSTFEED APGTVIGTLA EDLHMKVSGD
61 TSFRLMKQFN SLLLRVREGD GQLTVGDAGL DRERLCGQAP QCVLAFDVVS FSQEQFRLVH
121 VEVEVRDVND HAPRFPPRAQI PVEVSEGA AV GTRIPLEVPV DEDVGANGLQ TVRLAEPHSP
181 FRVELQTRAD GAQCADLVLL QELDRESQAA YSLELVAQDG GRPPRSATAA LSVRVLDAND
241 HSPAFPQGAV AEVELAEDAP VGSLLLDLDA ADPDEGPNGD VVFAFGARTP PEARRLFRLD
301 PRSGRLTLAG PVDYERQDTY ELDVRAQDRG PGPRAATCKV IVRIRDVNDN APDIAITPLA
361 APGAPATSPF AAAAAAAAAALG GADASSPAGA GTPEAGATSL VPEGAARES L VALVSTSDRD
421 SGANGQVRCA LYGHEHFRLQ PAYAGSYLVV TAASLDRERI AEYNLTLVAE DRGAPPLRTV
481 RPYTVRVGDE NDNAPLFTRP VYEVSVRENN PPGAYLATVA ARDRDLGRNG QVTYRLLEAE
541 VGRAGGAVST YVSVDPATGA IYALRSFDYE TLRQLDVRIQ ASDGGSPQLS SSALVQVRVL
601 DQNDHAPVLV HPAPANGSLE VAVPGRTAKD TVVARVQARD ADEGANGELA FELQQQEPRE
661 AFAIGRRTE ILLTGDLSEQ PPGRVFRALL VISDGGRPPL TTTATVSFVV TAGGGRGPAA
721 PASAGSPERS RPPGSRLGVS GSVLQWDTPL IVIIIVLAGSC TTTTAAIIAI ATTCNRRKKE
781 VRKGGALREE RPGAAGGGAS APGSPEEAAR GAGPRPNMFD VLTFFPGTGKA PFGSPAADAP
841 PPAVAAAQVP GSEGGSATGE SACHFEGQQR LRGAAHEPYG ASPGFGKEPA PPVAVWKGHS
901 FNTISGREAE KFSGKDSGKG DSDFNDSDS ISGDALKKDL INHMQSGLWA *CTAECKILGH*
961 *SDRCWSPSCS* *GPNAHPSHP* *PAQMSTFCKS* TSLPRDPLRR DNYQAQLPK TVGLQSVYEK
1021 VLHRDYDRTV TLLSPPRPRGR LPDLQEIGVP **LYQSPPGRYL** **SPKKGANENV**

| Cell lines | Meth/Unmeth | RT-PCR |
|-------------|-------------|--------|
| MDA-MB-435s | M | - |
| ZR-75-30 | M | - |
| SUM229PE | M | - |
| SUM190PT | M | - |
| BT-483 | U | - |
| MDA-MB-436 | U | + |
| Hs578t | U | + |
| CAMA-1 | U | + |
| MCF7 | U | + |
| HCC1428 | U | + |
| HCC1937 | U | + |
| SUM159PT | U | + |

Table S1. Methylation of PCDH8 correlates with loss of message. 4/5 (80%) of cell lines with undetectable levels of message exhibit methylation of the PCDH8 promoter. M=methylated, U=unmethylated, -=no detection of message, +=detection of message.

| | <u>PCDH8+</u> | <u>PCDH8-</u> |
|---------|---------------|---------------|
| LOH+ | 10 | 7 |
| LOH- | 17 | 1 |
| | (p=0.0178) | |
| Unmeth | 8 | 7 |
| Meth | 0 | 6 |
| | (p=0.0456) | |
| ER+ | 26 | 2 |
| ER- | 3 | 5 |
| | (p=0.001) | |
| PR+ | 21 | 0 |
| PR- | 8 | 7 |
| | (p=0.001) | |
| S-phase | | |
| >10 | 10 | 7 |
| <10 | 13 | 1 |
| | (p=0.0454) | |

Table S2. PCDH8 loss correlates with loss of heterozygosity (LOH), promoter methylation, loss of estrogen receptor (ER) expression, loss of progesterone receptor (PR) expression, and increased S-phase tumors.
 LOH+ = presence of LOH, LOH- = absence of LOH, Unmeth=unmethylated, Meth=methylated.

| Amplification primers | Sequence | Sequencing primers | Sequence |
|-----------------------|--------------------------|--------------------|----------------------|
| PCDH8-F5 | CCTTAGCCTTTCGGATCGCACT | P8SEQF1B | ATGAGTCCTGTGAGGCGT |
| PCDH8-R5 | CTCGCGTCTGCAGCTCCA | P8SEQR2 | AAGGCCAGCACGCACTGCG |
| | | P8SEQF2 | CGCAGTGCGTGCTGGCCTT |
| | | P8SEQF0 | AGCCTTTCGGATCGCACT |
| | | P8SEQR0 | CTGTGCGGCTCGGCCAG |
| PCDH8-F6C | TTTCGCGTGGAGCTGCAGAC | P8SEQF12 | GACGCGAGCGGACGGCG |
| PCDH8-R6D | TTGTCGTTCTCGTCGCCAC | P8SEQF4 | CGCGATCAGGCCGCT |
| | | P8SEQF5 | TGCCACTTCGCTGGTGCC |
| PCDH8-BKUP3F | GTGCGCTGCGCCCTCTATG | P8SEQF13 | GCCCTCTATGGGCACGAG |
| PCDH8-BKUP3R | CTGTTACCACGAAGCTGACA | P8SEQF6 | CCGGTCTATGAGGTGTCG |
| | | P8SEQF7 | CTGGACCAGAACGACCATGC |
| | | P8SEQR8 | ACAGTTGCGGTGGTGGT |
| PCDH8-F4 | CAGGAGCCGCGCGAAG | PCDH8-F4 | CAGGAGCCGCGCGAAG |
| PCDH8-R4 | CTGCAGCAGGGAATAGGG | P8SEQF14 | GAAGCCTTCGCCATCGGCCG |
| | | PCDH8-R4 | CTGCAGCAGGGAATAGGG |
| | | P8SEQR11 | CGGGAGCCGAGGCTCCGCC |
| PCDH8-X2F | GGTAGGGTGGGTGCATTCAGGTAG | 13-50F | GTAGACAACCTGTCGCACTT |
| PCDH8-X2R | GCGGGAAAGAAGAGTCCTCACCAC | P8SEQX2R | CTCACCCTCTGCATGTGGT |
| PCDH8-X3F | CTGACCCAGGCTGACATGCTGAAG | P8SEQX3F | GGAAGCCTGAATATGTATAA |
| PCDH8-X3R | TTAGGGGCTTCTCGGAGTGACCTG | P8R2C | CGGAGTGACCTGTATATGTG |

Table S3. Catalogue of PCDH8 PCR amplification and sequencing primers.