Figure S1. Cells were treated with ionomycin (a calcium ionophore). The increase in cellular $\mathrm{Ca}^{2+}$ levels was measured by flow cytometry.


Figure S2. Membrane repair leads to proliferation of Hs 738 .St/Int cells. (A) Hs 738. St/Int cells were electroporated twice at $100 \mu \mathrm{~F}$ (at 5 -minute intervals). Cells ( $1 \times$ $10^{3}$ cells/well) were plated in a 16 -well microtiter E-plate. Data were normalized at 10 h , which was the duration of cell adherence. $P<0.05$ vs. control treatment values. (B) FDx (green fluorescence) can be detected in damaged cells, but not in wild-type (WT) which were non-electroporated cells, suggesting membrane injury due to electroporation. The damaged cells participate in a membrane-repair response that leads to cell proliferation (bottom right panel). Scale bar, $50 \mu \mathrm{~m}$. Trans, transmission.
A

$$
\rightarrow \text { WT } \rightarrow-100 \mu \mathrm{~F} \times 2
$$


B


Figure S3. AnxA4 promotes cell proliferation. After incubation for 24 h , the cell growth rate of (A) cells overexpressing AnxA4, and (B) cells containing AnxA4-specific siRNA were measured. It was observed that AnxA4 regulated the cell index in a time-dependent manner. (A and B) Data were normalized from measurements taken at 24 h , which was when transfection was initiated. The detection time from three independent experiments is represented as mean $\pm \mathrm{SD}, \mathrm{n}=3 . P$ values were calculated using the two-sample Kolmogorov-Smirnov test.

A


B


Table S1. List of primer sequences used for construction.

| Primer | Sequence $\left(5^{\prime} \rightarrow 3^{\prime}\right)$ | Purpose |
| :--- | :--- | :--- |
| anxa4-F | atataagcttgccaccatggccatggcaaccaaa | Constructing pcDNA 3.1(+)/AnxA4 |
| anxa4-R | gcgcgggaattcttaatcatctcctccaca | Constructing pcDNA 3.1(+)/AnxA4 |
| anxa4-F2 | atataagcttgccaccatggccatggcaaccaaa | Constructing pEGFP-C1/AnxA4 |
| anxa4-R2 | agcgcgcctgcagttaatcatctcctccaca | Constructing pEGFP-C1/AnxA4 |
| vacA-F | gagtgaataatcaagtgggtgg | Constructing vacA mutant |
| vacA-R | tcatcgcattactcaagctcaa | Constructing vacA mutant |
| vacA-F2 | ggcacgattaaagtgggagg | Checking vacA mutant |
| vacA-R2 | gttagcccaaacattggtagg | Checking vacA mutant |

