

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: **ANXA4 induces membrane conformation and wound closure in MCF7 cells** (Related to Fig. 2). 3D Movie showing ANXA4-RFP (first clip) and A4 TrimMut-RFP (second clip) localization upon laser injury in MCF7A4⁻-CRISPR cells. Scale: 1 unit = 12.3 μm .

File Name: Supplementary Movie 2

Description: **ANXA4 triggers membrane curvature and rolling of supported membrane patches** (Related to Fig. 3). Supported secondary membrane patches (90% POPC, 10% POPS. DiD stain) before and after addition of recombinant ANXA4-GFP protein or A4 TrimMut protein in the presence of Ca^{2+} . Scale bar, 50 μm .

File Name: Supplementary Movie 3

Description: **Wound healing implicating two distinct mechanisms** (Related to Fig. 6 and Supplementary Fig. 4b). First, ANXA4-RFP/ANXA6-GFP translocation to wound edges and initiation of local wound closure. Secondly, excision of the damaged part of the membrane including the hole. Scale: 1 unit = 12.3 μm .