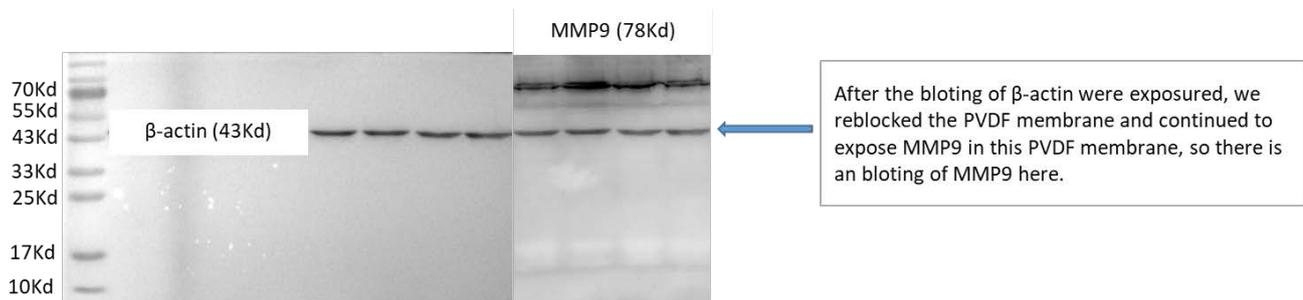


1. Figure S1: Western blot of MMP9 in MDA-MB-231-S, MDA-MB-231-R, MDA-MB-231-S<sup>ovESM1</sup> and MDA-MB-231-R<sup>shESM1</sup> cells in Figure 3j

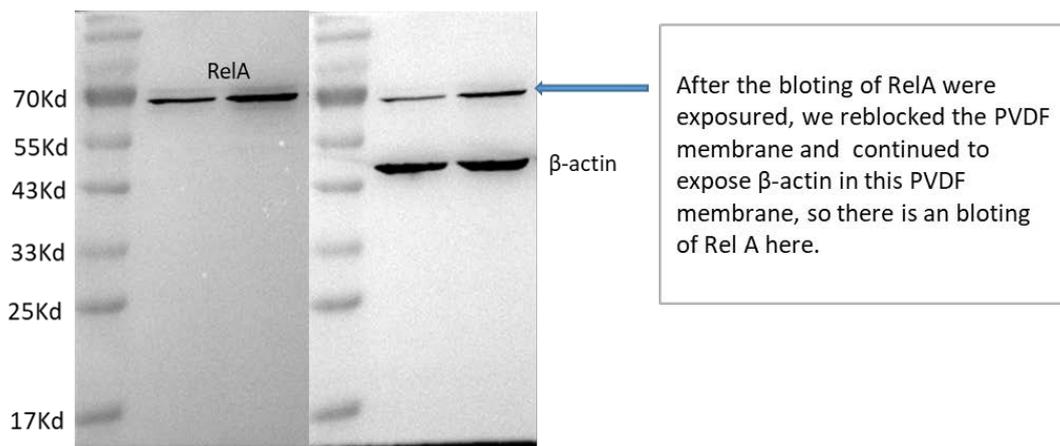
Loading order (left to right):

MDA-MB-231-S, MDA-MB-231-S<sup>ovESM1</sup>, MDA-MB-231-R, and MDA-MB-231-R<sup>shESM1</sup>



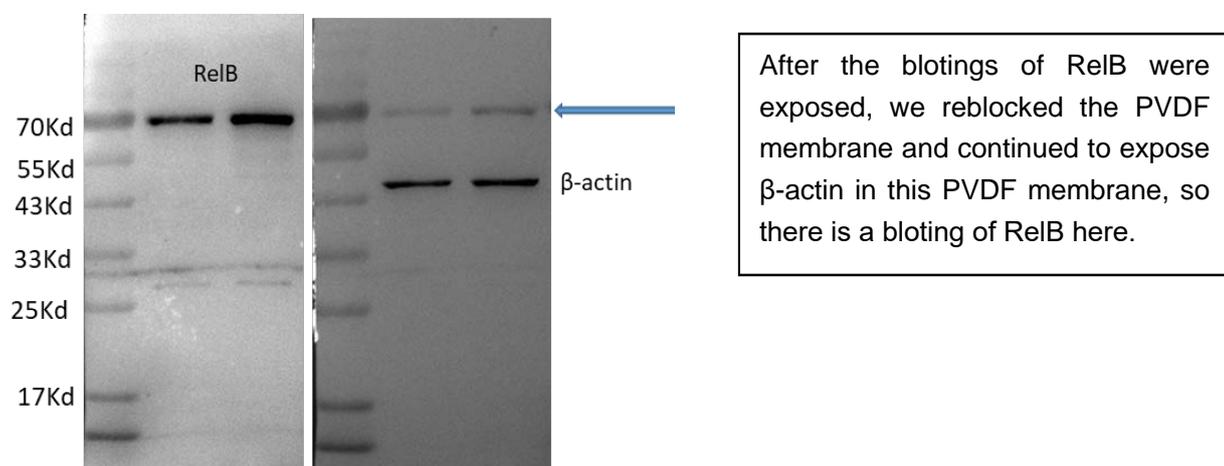
2. Figure S2: RelA or RelB was overexpressed in MDA-MB-231-S cells and detected by western blotting in Figure 4c:

Loading order (left to right): MDA-MB-231-S, MDA-MB-231-S<sup>ovRelA</sup>



Loading order (left to right):

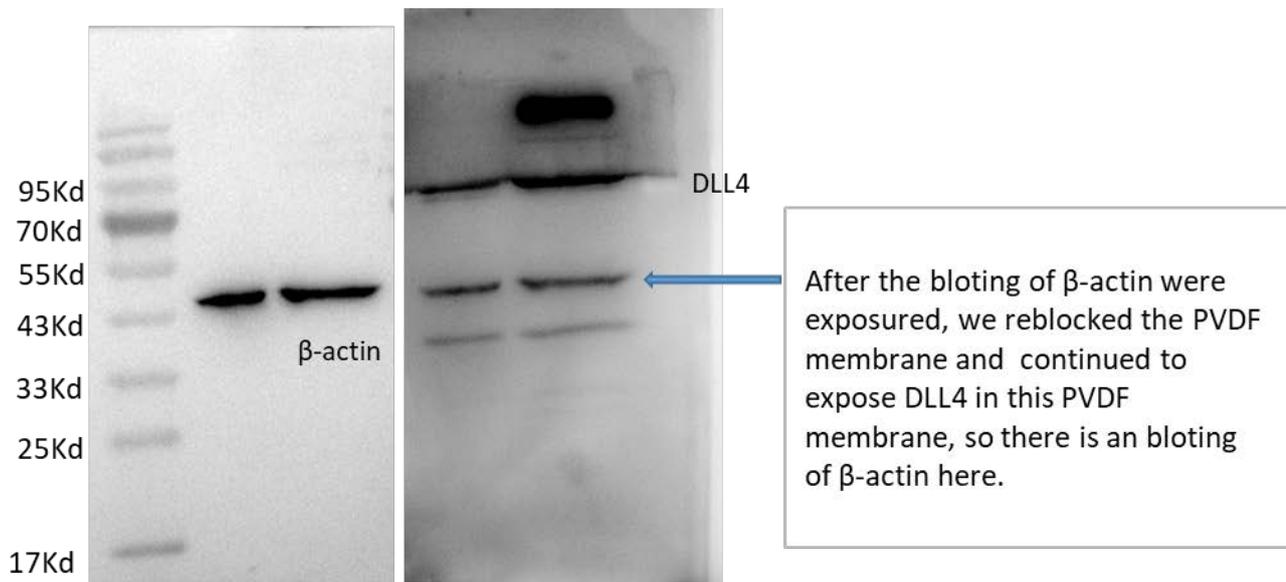
MDA-MB-231-S, MDA-MB-231-S<sup>ovRelB</sup>



3. Figure S3: Western blotting for DLL4 in HUVEC cells with or without human ESM1 added in Figure 6c:

Loading order (left to right):

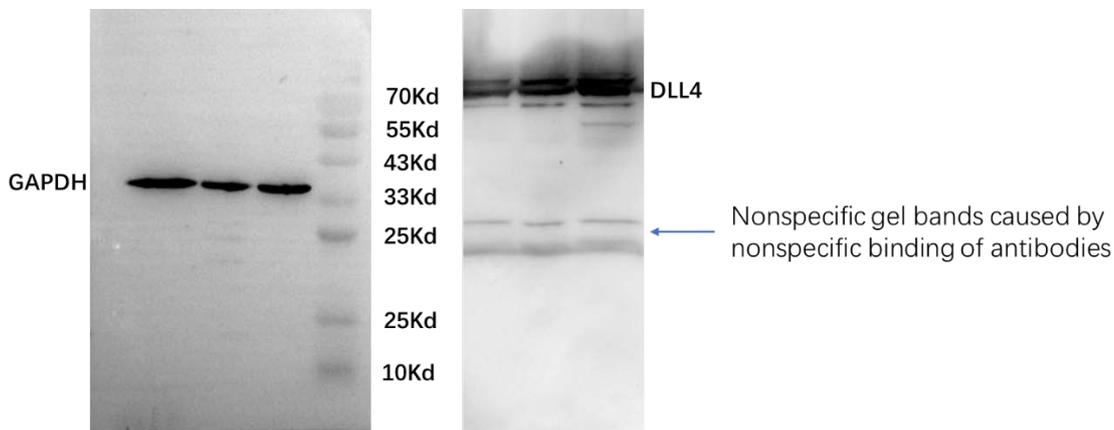
HUVEC, HUVEC-ESM1



4. Figure S4: Western blotting for DLL4 in MDA-MB-231-S, MDA-MB-231-S<sup>ovESM1</sup>, MDA-MB-231-R in Figure 6d:

Loading order (left to right):

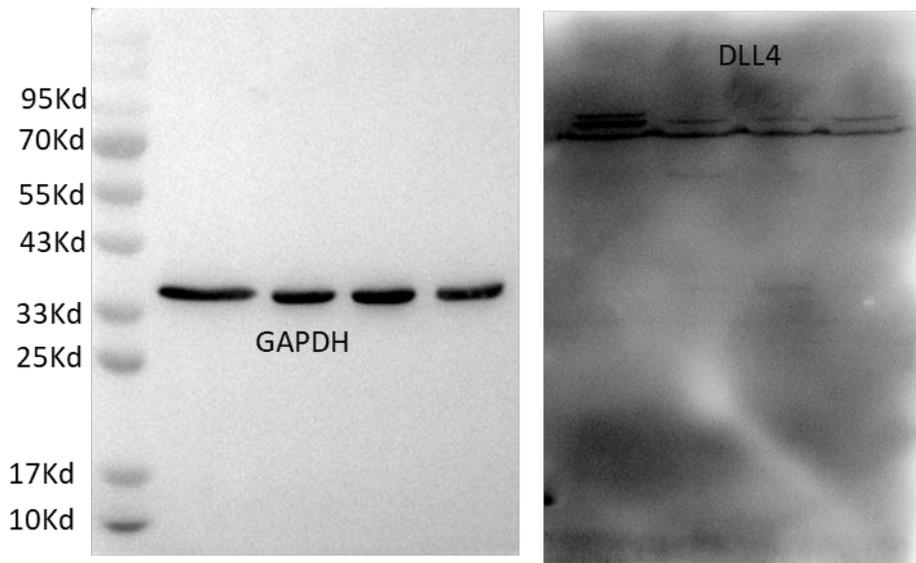
MDA-MB-231-S, MDA-MB-231-S<sup>ovESM1</sup>, MDA-MB-231-R



5. Figure S5: Western blotting for DLL4 in MDA-MB-231-R and MDA-MB-231-R<sup>shESM1#1-3</sup> in Figure 6e:

Loading order (left to right):

MDA-MB-231-R, MDA-MB-231-R<sup>shESM1#1</sup>, MDA-MB-231-R<sup>shESM1#2</sup>, MDA-MB-231-R<sup>shESM1#3</sup>



6. Figure S6: Western blotting for analyzing the expression of ESM1 deleted or not by the Crispr-Cas9 system in MDA-MB-231-R cells in Figure 7a:

Loading order (left to right):

MDA-MB-231-R, MDA-MB-231-R<sup>ESM1ko</sup>

