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Supplementary Information for

GUSBP11 Inhibited The Progression of Triple Negative Breast Cancer via Targeting The *miR-579-3p/SPNS2* Axis

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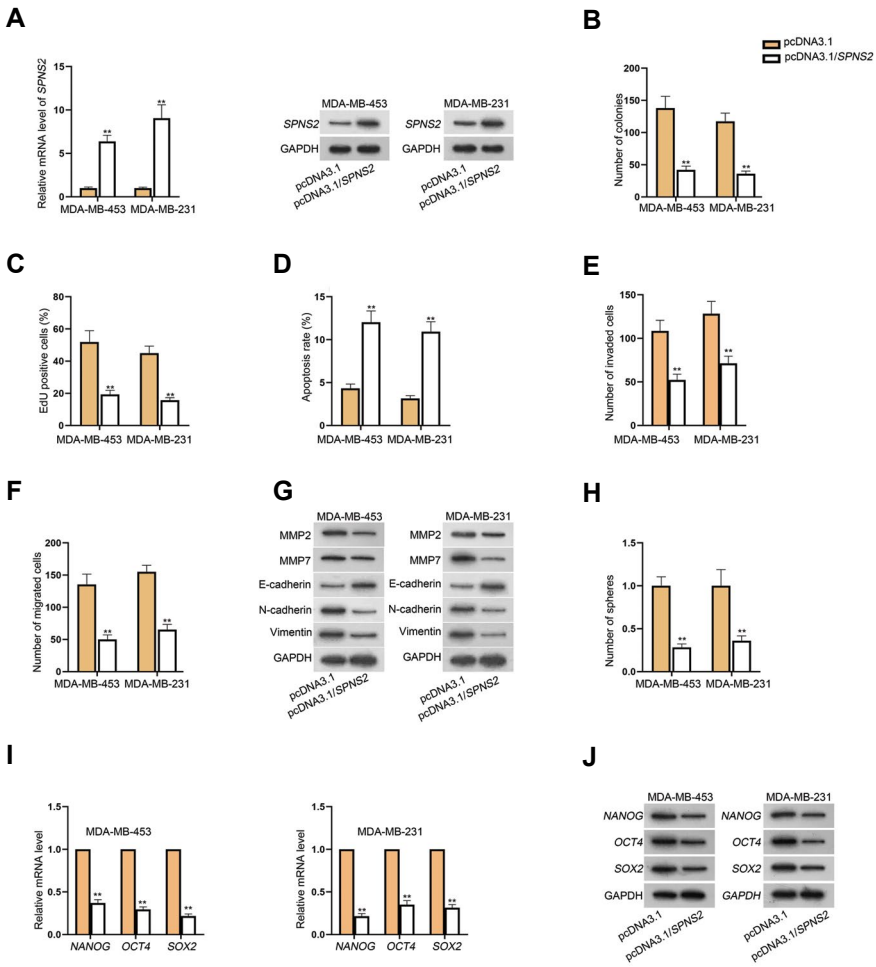

Fig.S1: *SPNS2* overexpression inhibits the TNBC cell lines progression. **A.** *SPNS2* expression was enhanced in the TNBC cell lines via the transfection of pcDNA3.1/*SPNS2*. **B, C.** The proliferative ability of the TNBC cell lines after *SPNS2* overexpression was verified through colony formation and EdU assays. **D.** Flow cytometry was taken to analyze the apoptosis of the TNBC cell lines transfected with pcDNA3.1/*SPNS2*. **E, F.** Transwell assays were carried out to assess the invasive and the migratory ability of the TNBC cell lines upon *SPNS2* overexpression. **G.** The protein expression of EMT markers as well as cell invasion-related factors in the pcDNA3.1/*SPNS2*-transfected TNBC cell lines. **H.** The number of spheres in the TNBC cell lines upon *SPNS2* overexpression. **I** and **J.** The RNA levels as well as protein levels of stemness markers were measured in the pcDNA3.1/*SPNS2*–transfected TNBC cell lines. Three independent experiments were conducted (n=3). TNBC; Triple negative breast cancer, EMT; Epithelial-to-mesenchymal transition, and **; P<0.01.

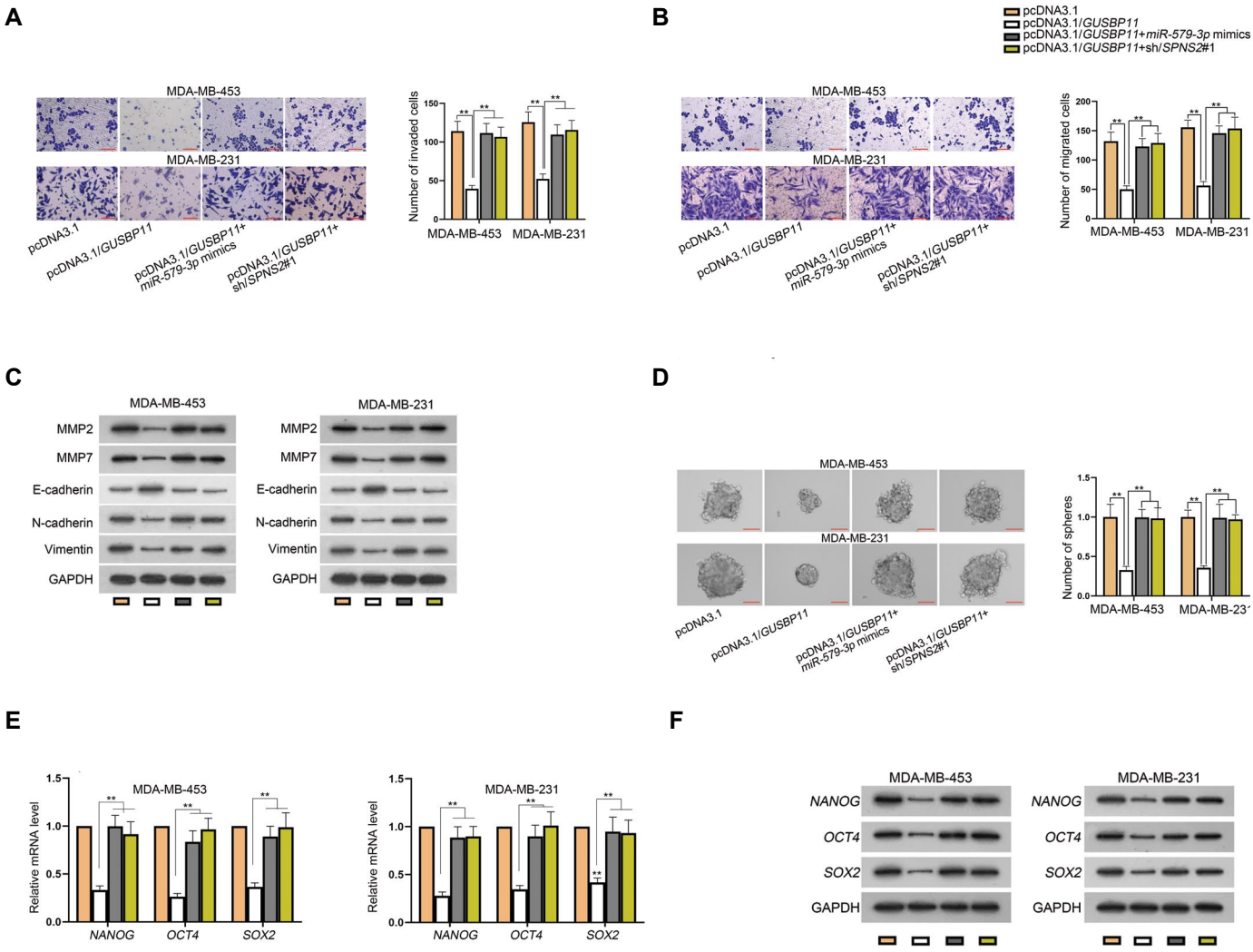

Fig.S2: *GUSBP11* represses cell migration, EMT and stemness in the TNBC cell lines via interacting with *miR-579-3p* to up-regulate *SPNS2* expression. Rescue experiments were conducted in the TNBC cell lines transfected with pcDNA3.1, pcDNA3.1/*GUSBP11*, pcDNA3.1/*GUSBP11*+*miR-579-3p* mimics and pcDNA3.1/*GUSBP11*+sh/*SPNS2*#1 plasmids. **A, B.** The migration and invasion of the TNBC cell lines were evaluated by Transwell assays in different groups (scale bar: 50 μm). **C.** The protein levels of EMT markers as well as cell invasion-related factors were tested in the TNBC cell lines under different transfection conditions. **D.** The stmenss of the TNBC cell lines under different transfection conditions was evaluated by sphere formation assays (scale bar: 100 μm). **E** and **F.** The RNA levels as well as protein levels of stemness markers were measured in the TNBC cell lines in different groups. Three independent experiments were conducted (n=3). TNBC; Triple negative breast cancer, EMT; Epithelial-to-mesenchymal transition, and **; P<0.01.