

775 **SUPPLEMENTARY INFORMATION**

776

777 **Supplementary Table 1: shRNA tumor suppressor library used for the 3D screen.**

778 TRC numbers, oligo sequences, clone names, reference sequences, and gene names of the
779 shRNA constructs used for the 3D cell fate screen in PHBECs.

780

781

782 **Supplementary Table 2: Raw data of the 3D screen.**

783 Excel file containing results of K14 and K19 immunofluorescent staining as well as
784 morphological parameters (number and size of spheres) of all shRNA conditions. Marker 1 =
785 K14, Marker 2 = K19.

786

787

788 **Supplementary Table 3: Results of redundant shRNA analysis (RSA) of the 3D screen.**

789 Excel file containing results of RSA analysis of the number of spheres as well as the number
790 of double-positive cells.

791

792

793 **Supplementary Table 4: Differentially regulated genes in PHBECs upon removal of**
794 **LATS.**

795 Excel file of the significantly differentially regulated genes in the contrast shLATS versus
796 shNT at a cut-off of fold-change (FC) >2.0, expression value >4.0, adjusted $P < 0.01$.

797

798

799 **Supplementary Table 5: Differentially regulated genes in MCF10A cells upon removal**
800 **of LATS and/or expression of YAP, TAZ and ER α .**

801 Excel file of the significantly differentially regulated genes at a cut-off of fold-change (FC)
802 >2.0, expression value >4.0, adjusted $P < 0.01$.

803

804

805 **Supplementary Table 6: ER α interactome in luminal breast cancer cells with and**
806 **without LATS1.**

807 Excel file of ratios of ER α interacting proteins in the presence or absence of LATS1.