

**Title:** Supplementary Data 1.

**Description:** RNA-seq. of CD11B+/GR1+ cells from MG, SP and BT between WT and MT mice.

**Title:** Supplementary Data 2.

**Description:** DIA-MS profile at different development groups from both Brca1 MT and WT mice.

**Title:** Supplementary Data 3.

**Description:** The CV% of duplicate per sample in DIA-MS.

**Title:** Supplementary Data 4.

**Description:** 453 genes in terms of its relative fold change from RNA sequencing on four mammary epithelial cell lines with differential expression of S100a9, including the WT, over expression (OE)-S100a9-WT, Brca1-MT, and sgS100a9-Brca1-MT cell lines