b a Ki67 staining Ki67+ cells % injected cells: PyMT+/0;CTSB+/0 injected cells: PyMT+/0;wt injected PyMT^{+/0} PyMT* CTSB+/0 cells: wt **C** TUNEL staining injected cells: PyMT+/0;CTSB+/0 injected cells: PyMT+/0;wt d necrotic area e necrotic area %

Supplementary figure 2. Quantitative histologic analyses of tumors derived from orthotopic transplantation of PyMT tumor cells. *a*, Ki67 peroxidase staining on tumor paraffin section for detection of proliferating cells and *b*, quantitation of Ki67+ cells. *c*, Terminal deoxynucleotidyl transferase dUTP nick end labeling (TUNEL) peroxidase staining on tumor paraffin section for detection of apoptotic cells. *d*, necrotic areas in hematoxylin stained sections and *e*, quantitation of necrotic area.

injected

PyMT^{+/0};

PyMT^{+/0}; CTSB^{+/0}

injected cells: PyMT+/0;CTSB+/0

injected cells: PyMT+/0;wt