

Supplementary Data

Supplementary Figure 1. Cre-inducible *Rosa26*-myr-*p110α* knock-in allele with or without Cre-recombinase.

Supplementary Figure 2. Expression of myr-*p110α* with deletion of *p53* in mouse embryonic fibroblasts induces transformation *in vitro* and *in vivo*.

Supplementary Figure 3. Frequency of mutations in three genes, *PIK3CA*, *p53*, and *Kras*, in human breast cancers.

Supplementary Figure 4. Addition of myr-*p110α* elevates the levels of PI3K signaling activation in a copy number-dependent manner.

Supplementary Figure 5. Increased gene dosage of myr-*p110α*, when combined with *p53* deletion, modifies tumor subtype to carcinoma.