



**Supplementary Figure S1.** HER2 pathways schematic overview. L, ligand, binds to the of human epidermal growth factor receptor (HeR1/3/4) extracellular domain, stabilizing the active HER2 heterodimers formation; PI3K, phosphoinositide 3-kinase; AKT, protein kinase B; mTOR, mammalian target of rapamycin; SOS, Son of Sevenless protein; RAS, member of signal cell transduction proteins; RAF, proto-oncogene serine/threonine-protein kinase; MEK, mitogen-activated protein kinase kinase enzyme; MAPK, mitogen-activated protein kinase.