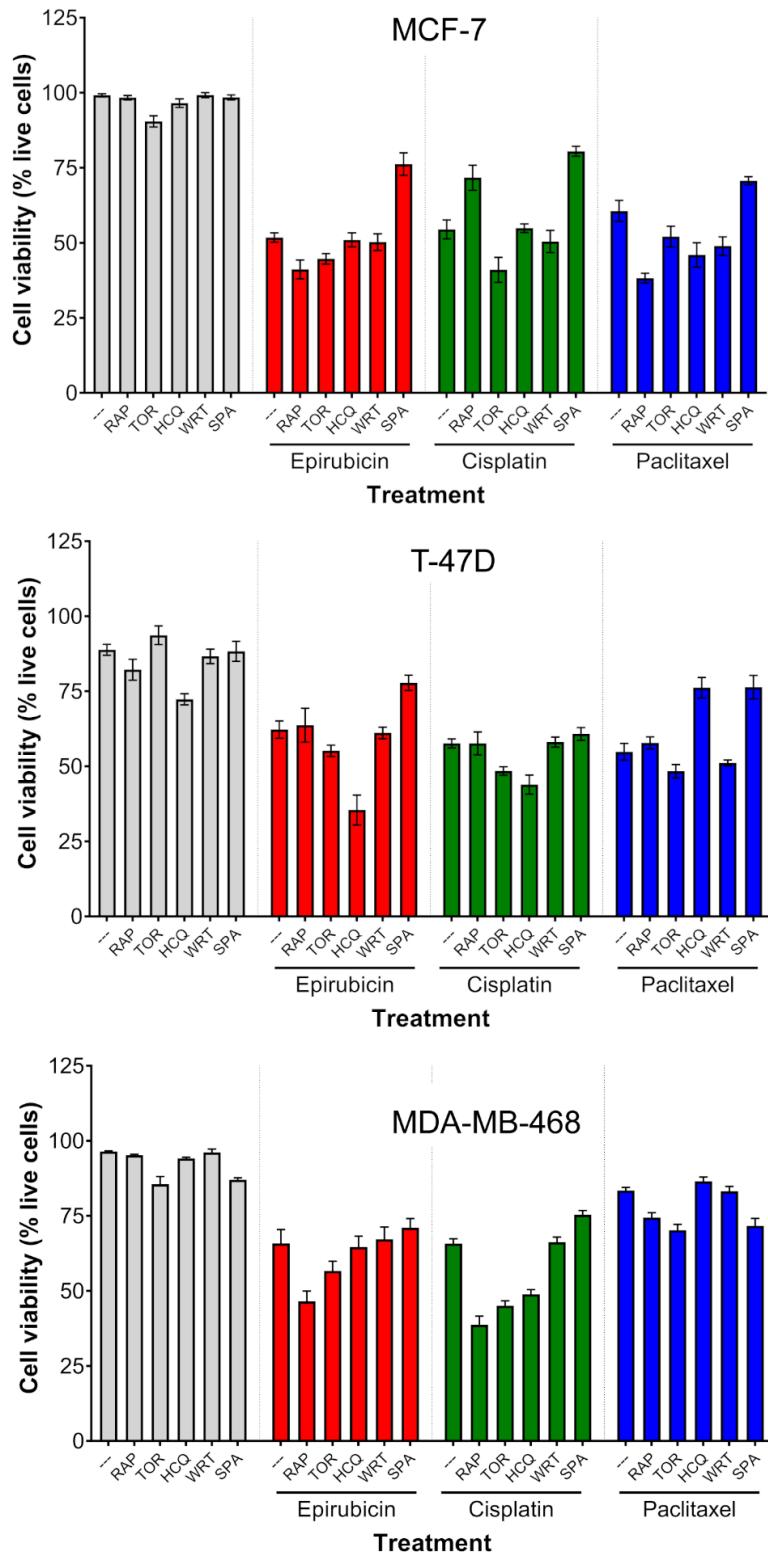
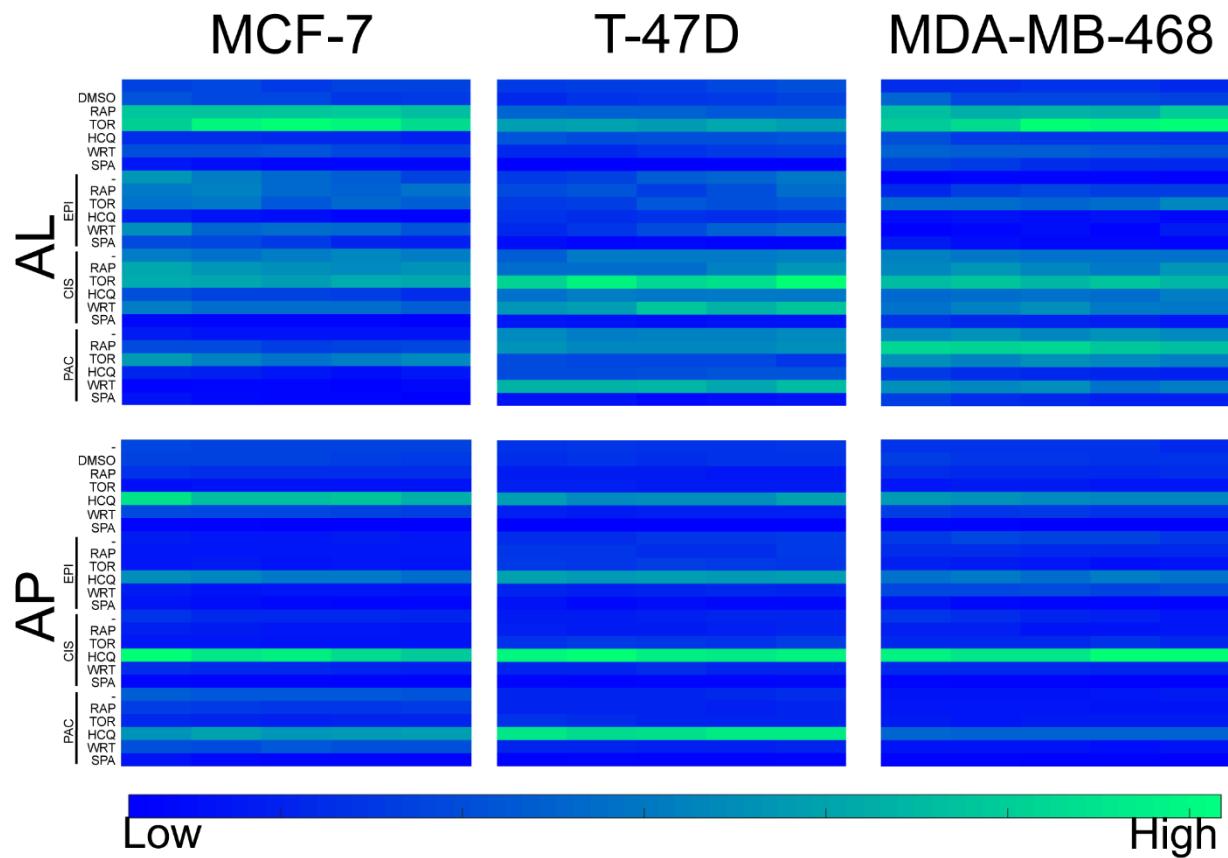


**Figure S1.** Image analysis pipeline.



**Figure S2.** Cytotoxicity profiles for each chemotherapeutic drug and autophagy regulator combination for each cell line. CIS: cisplatin, EPI: epirubicin, H or HCQ: hydroxychloroquine, PAC: paclitaxel R: rapamycin, S: Spautin-1, T: Torin-2, W: wortmannin.



**Figure S3.** Dynamic changes in AL and AP composition of the autophagy sensor in three breast cancer cell lines upon multiple drug combinations. AL: autophagolysosomes, AP: autophagosomes, CIS: cisplatin, CYT: cytoplasm, DMSO: dimethylsulfoxide, EPI: epirubicin, HCQ: hydroxychloroquine, PAC: paclitaxel, RAP: rapamycin, SPA: Spautin-1, TOR: Torin-2, WRT: wortmannin.