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Erratum
StAR-related lipid transfer domain protein 3 (STARD3) regulates HER2 and promotes HER2-positive breast cancer progression through interaction with HSP90 and SRC signaling: Am J Cancer Res. 2023; 13(11): 5151-5173

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The authors regret to inform that technical inconsistencies were identified in **Figures 3A**, **5E**, and **6D**. Specifically, in **Figures 3A** and **5E**, due to a clerical error in Adobe Illustrator while using a shared formatting template, some placeholder images for the STARD3 bands were inadvertently not updated with the correct original data for each cell line. In **Figure 6D**, an orientation anomaly (horizontal flip) occurred during the final cropping and export phase, likely due to a software glitch. The authors have thoroughly re-verified all original, uncropped raw scans and confirm that these errors are purely technical, aesthetic and do not alter the scientific findings or the conclusions of our study. The authors sincerely apologize for any confusion these oversights may have caused. The corrected **Figures 3**, **5**, **6** are shown below.

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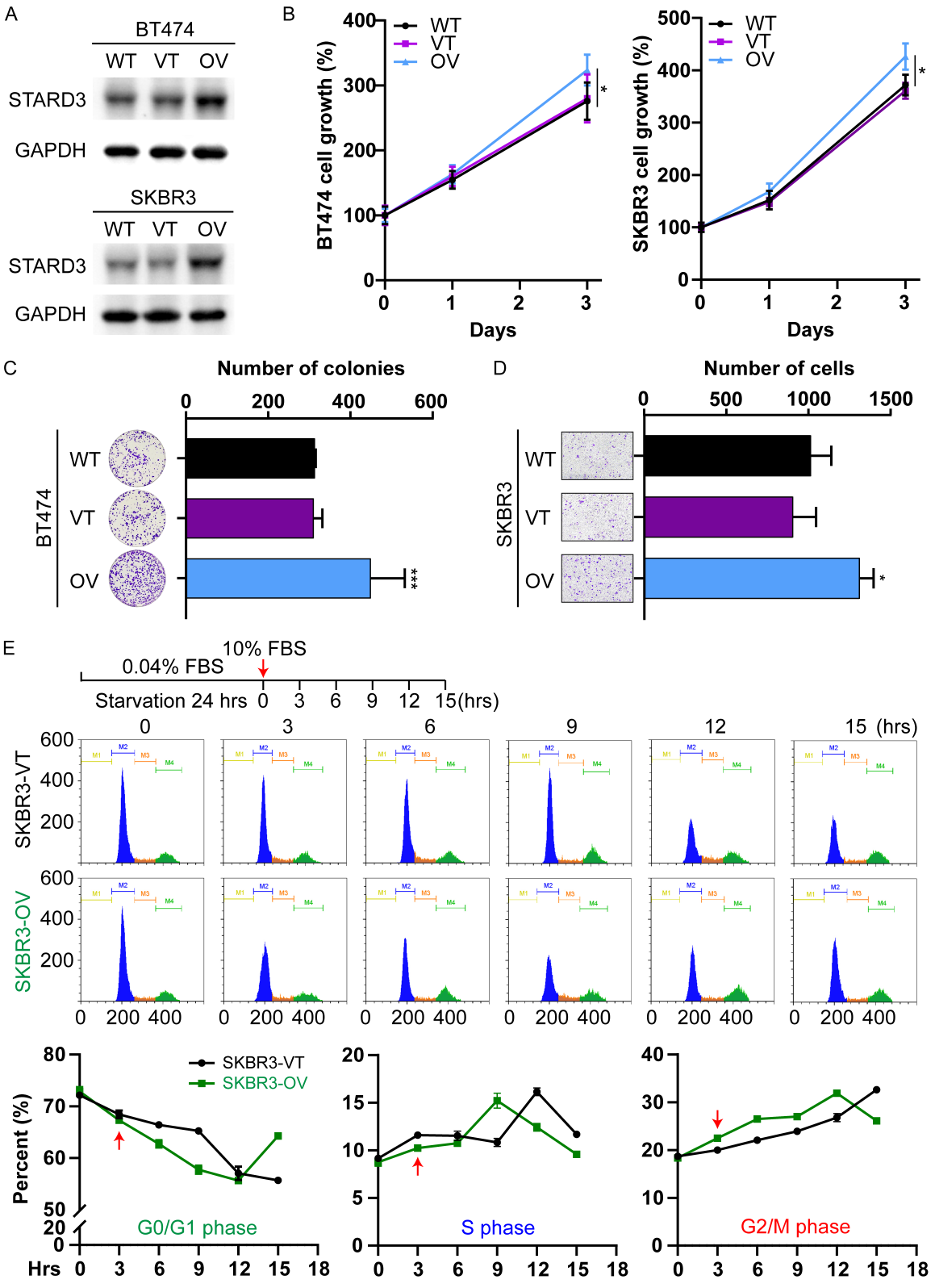
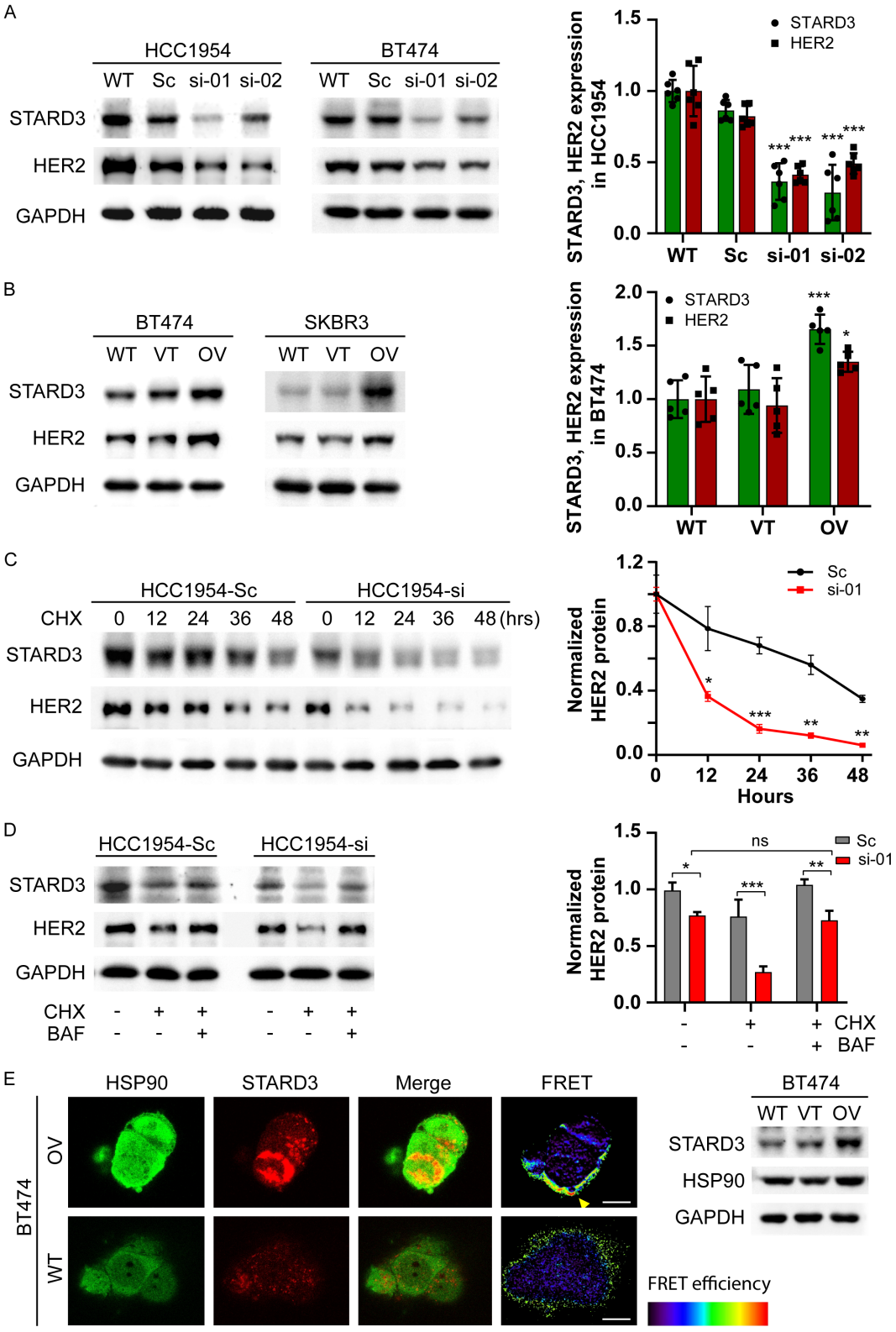


Figure 3. STARD3 overexpression promotes the malignant characterization of HER2+ cancer cells. A. Stable BT474 and SKBR3 cell lines overexpressing STARD3 protein were established. Vector control and the wild-type were controls (OV, VT, WT). B. Trypan blue assay for detection of cell proliferation in STARD3 overexpressing BT474 and SKBR3. Count the number of cells on days 1 and 3. C. Colony formation assay for detection of STARD3 overexpression in BT474-WT, VT, OV cells. Cells were fixed and stained with crystal violet after 14 days to count the colonies. D. Transwell assay for detecting STARD3 overexpression in BT474-WT, VT, OV cells. Cells were fixed and stained with

crystal violet after 24 hours and counted migrated-cell numbers. E. A concept diagram of the study (Top). Cells from synchronization were released from the 10% FBS treatment, and cells were harvested every 3 h for a total of 15 h. Flow cytometry analysis determines the percentage of cell populations in different cell cycle stages (middle and low). The results were triplicated for statistics (bottom). All data are presented as mean ± SD. The *p* values were calculated using one-way ANOVA (**P < 0.05, ***P < 0.001*).



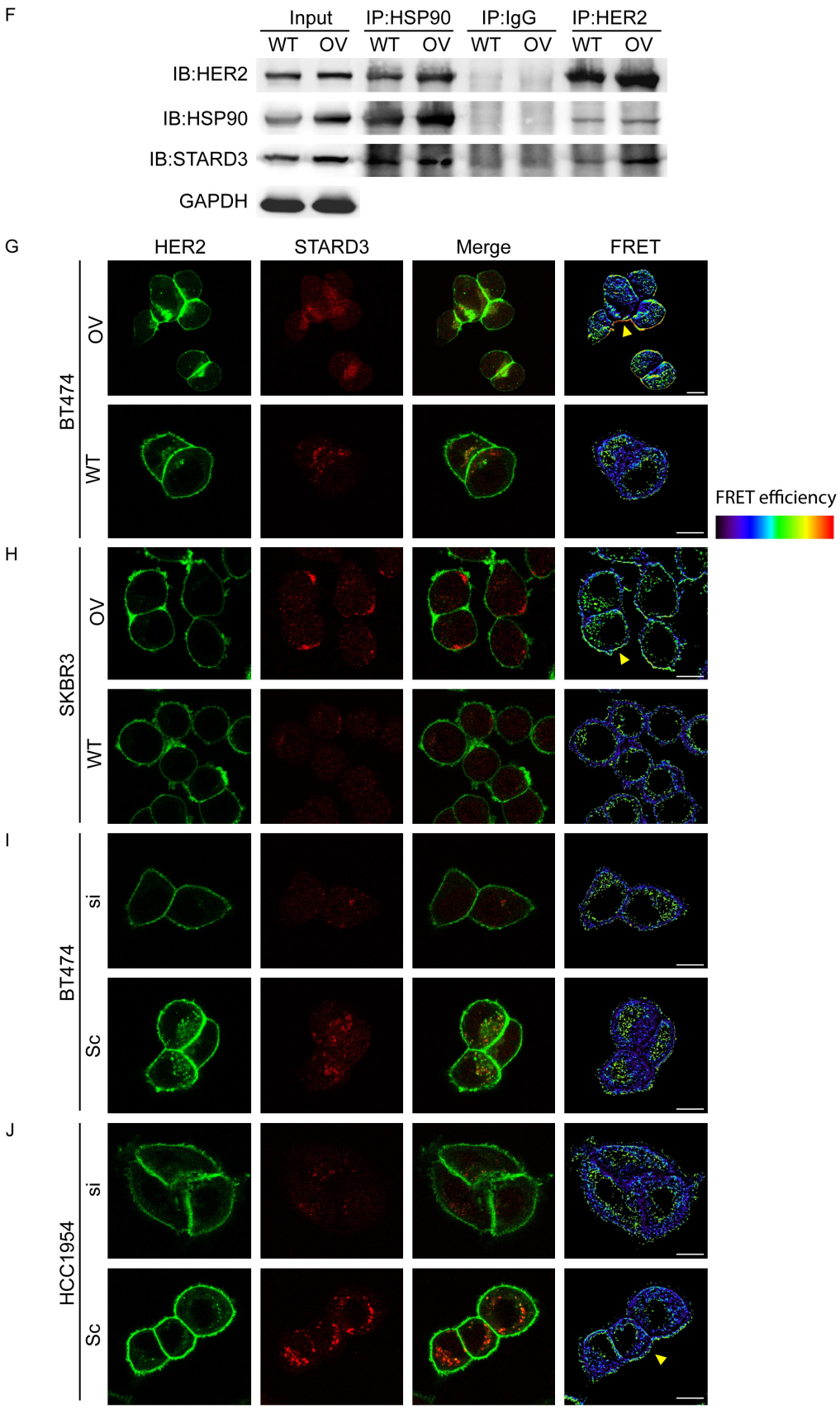

F
Input
IP:HSP90
IP:IgG
IP:HER2
WT
OV
IB:HER2
IB:HSP90
IB:STARD3
GAPDH
G
HER2
STARD3
Merge
FRET
BT474
OV
WT
FRET efficiency
H
SKBR3
I
si
Sc
J
HCC1954

Figure 5. STARD3 expression plays an essential role in maintaining HER2 protein stability. (A, B) HER2 expression was detected in (A) STARD3 knockdown HCC1954 cells and (B) STARD3 overexpression BT474 cells by western blot. (C) HER2 protein levels in HCC1954-sc and HCC1954-si cells treated with cycloheximide (CHX) using western blot. HER2 expression was normalized with GAPDH, and its expression at time point 0 h served as a basal level control, as shown in the right panel. (D) HCC1954-Sc and HCC1954-si cells were pretreated with 20 nM BAF for 4 h before being treated for 24 hours with or without 20 μM CHX. Quantification of HER2 protein levels was normalized using GAPDH, as described in (C), shown on the right. (E) FRET activity assay of STARD3/HSP90 protein-protein interaction in BT474-0V cells. Western blot analysis of STARD3 and HSP90 is shown in the right panel. (F) Co-immunoprecipitation (CoIP) analysis was performed to test the interaction between HER2 and HSP90 in BT474-0V cells. Whole-cell lysates were used as input controls. Immunoprecipitation was performed using anti-HSP90 antibody (IP:HSP90) and anti-HER2 antibody (IP:HER2), respectively (G-J) FRET activity assay detecting STARD3/HER2 interaction in (G, H) STARD3 overexpression cells and (I, J) STARD3 knockdown cells. Cells transfected with scrambled sequences served as controls. Scale bar = 36.8 μm. All data are shown as mean ± SD. The *p* values were calculated using a two-tailed unpaired Student's t-test (**P < 0.05, **P < 0.01, ***P < 0.001*).

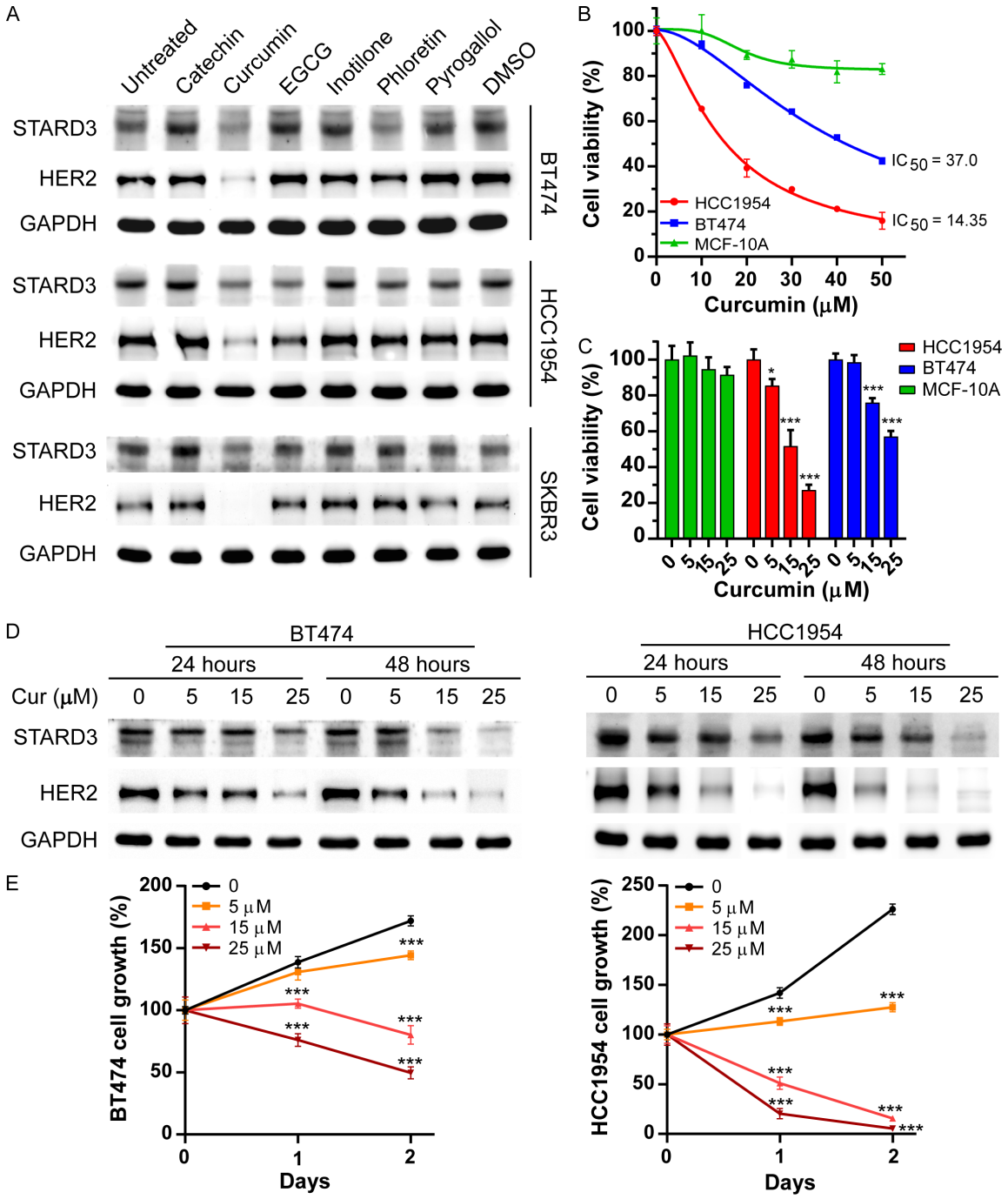


Figure 6. Curcumin treatment inhibits STARD3-mediated HER2+ cell growth. A. HER2+ cells were treated with natural compounds (25 μM) for 24 hours. STARD3 and HER2 expression was detected by western blot. DMSO was used as a vehicle. GAPDH was used as an internal control. B. Cell viability detected IC_{50} of HCC1954, BT474, and MCF-10A using an MTT assay. C. The confirmation of cell viability using the Trypan blue cell counter on HCC1954, BT474, and MCF-10A. D. Treated BT474 and HCC1954 cells in a dose- and time-dependent manner of curcumin (0-25 μM) for 24 and 48 hours. Western blot results displayed the protein levels of STARD3 and HER2. E. Cell proliferation assay of curcumin treatment on BT474 and HCC1954 cells. Cell number was counted on day 1 and day 2 of treatment using Trypan blue. The *p* values were calculated using two-way ANOVA (**P < 0.05, **P < 0.01, ***P < 0.001*).