

Kanglaite sensitizes colorectal cancer cells to Taxol via NF- κ B inhibition and connexin 43 upregulation

Yijia Wang^{1,+}, Chunze Zhang^{1,+}, Shiwu Zhang¹, Zhenying Zhao¹, Jiawen Wang¹, Jiali Song¹, Yue Wang¹, Jun Liu^{1,*}, Shaobin Hou^{2,*}

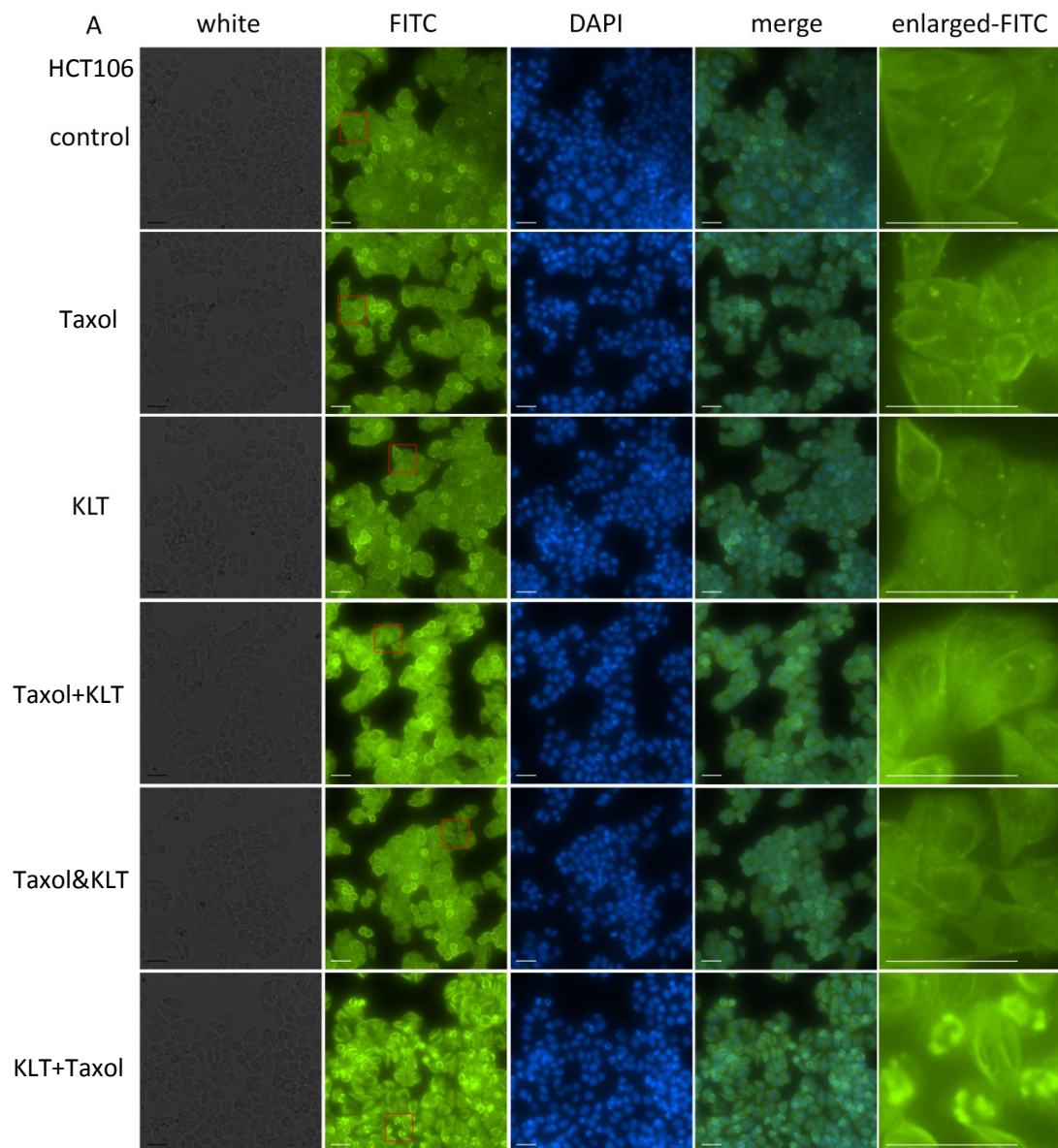
¹Tianjin Union Medical Center, Tianjin, 300121, China

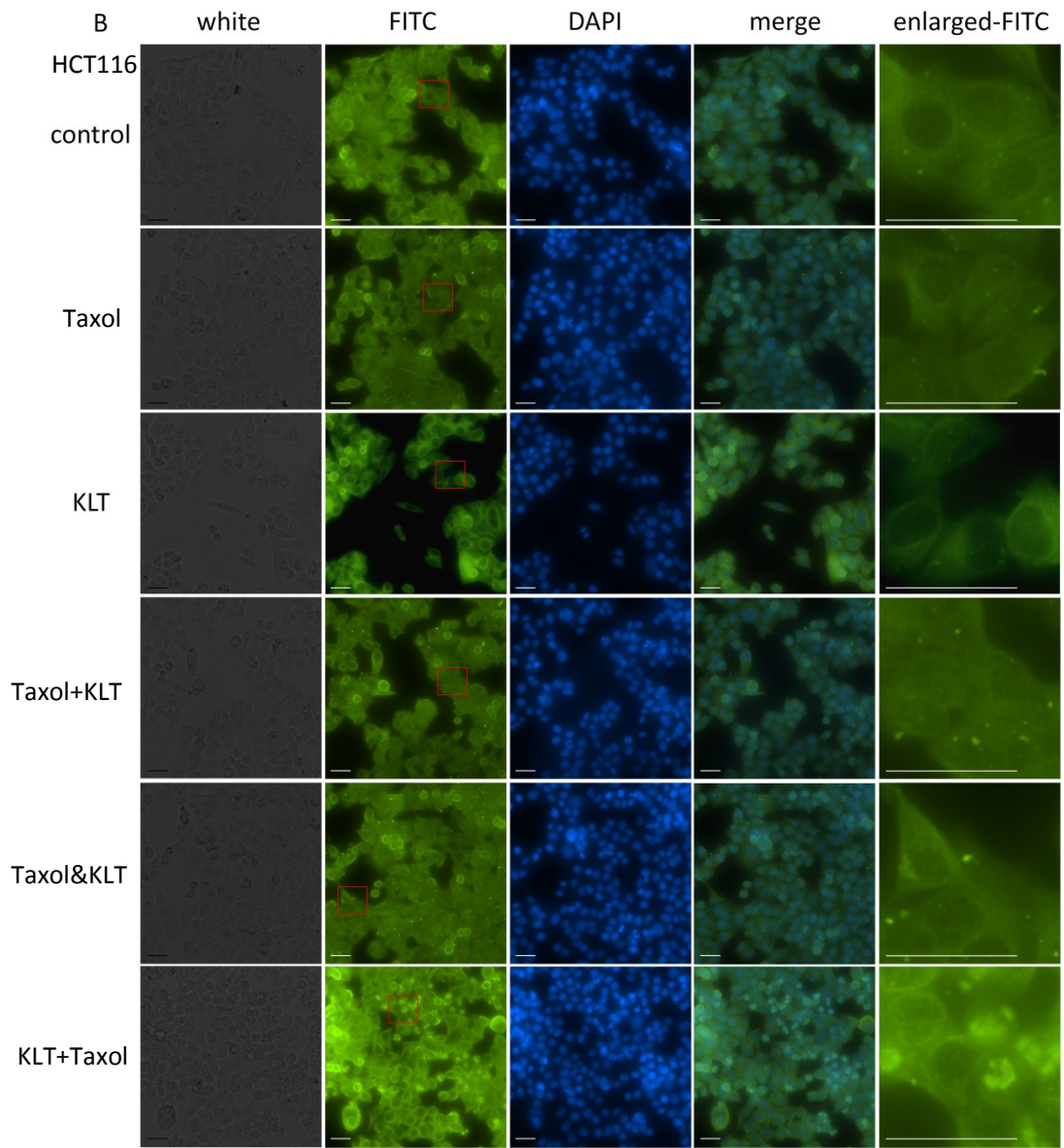
²Advanced Studies in Genomics, Proteomics, and Bioinformatics, University of Hawaii at Manoa 2538 McCarthy Mall, Snyder Hall, Honolulu, HI 96822, USA

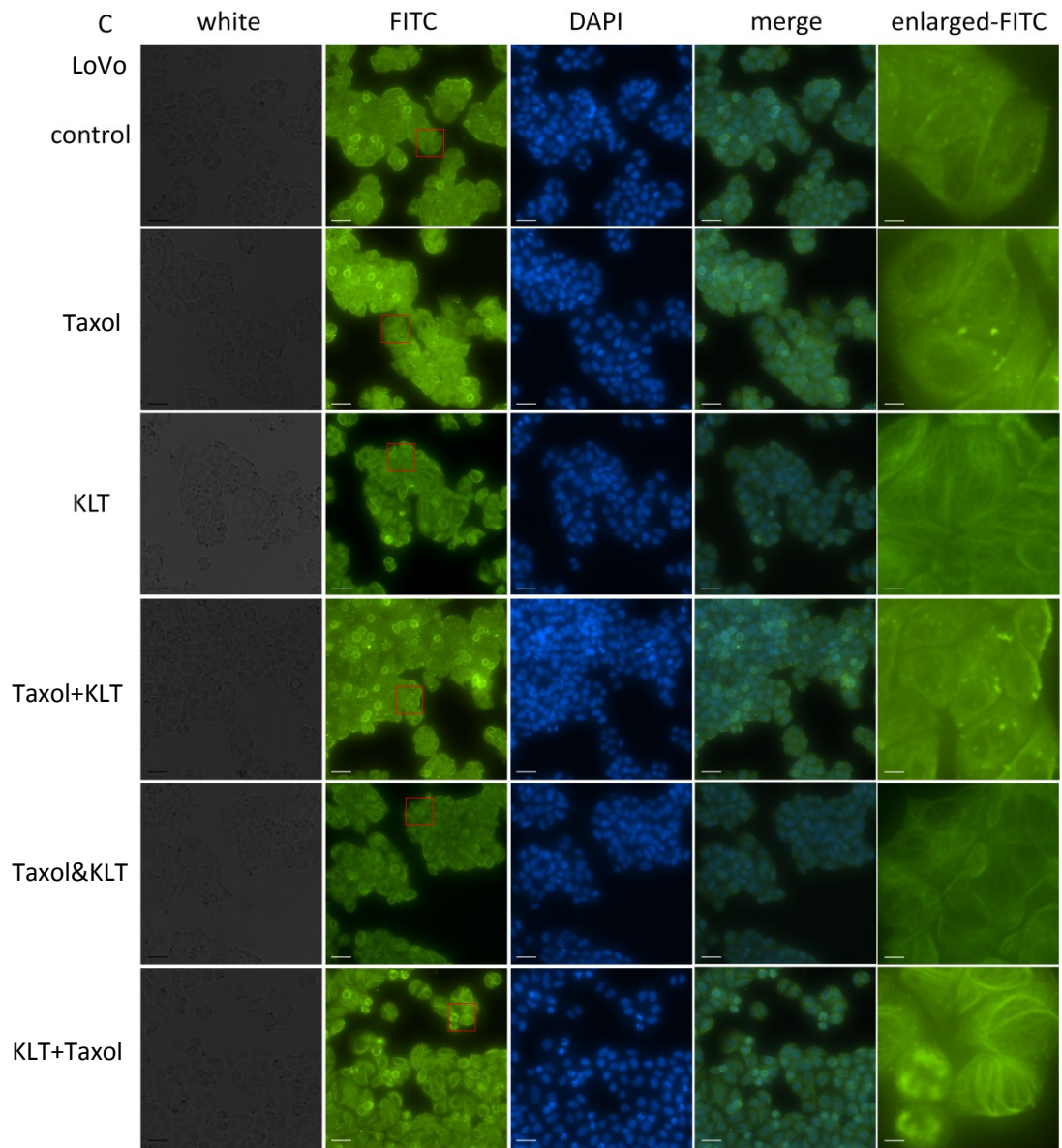
*corresponding author: Jun Liu(junliu_sci@163.com) and Shaobin Hou(shaobin@hawaii.edu)

+these authors contributed equally to this work

Supplementary materials







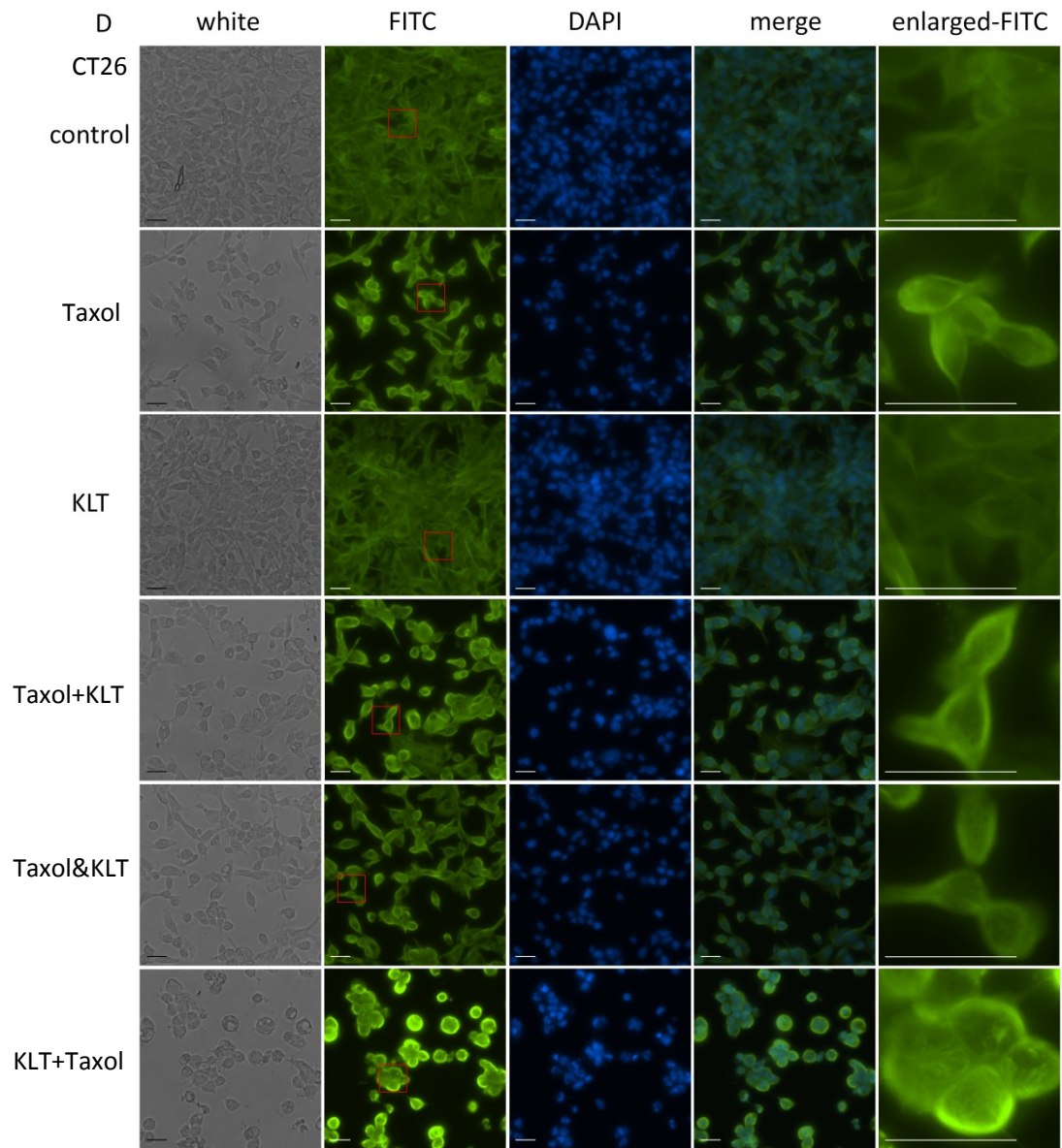
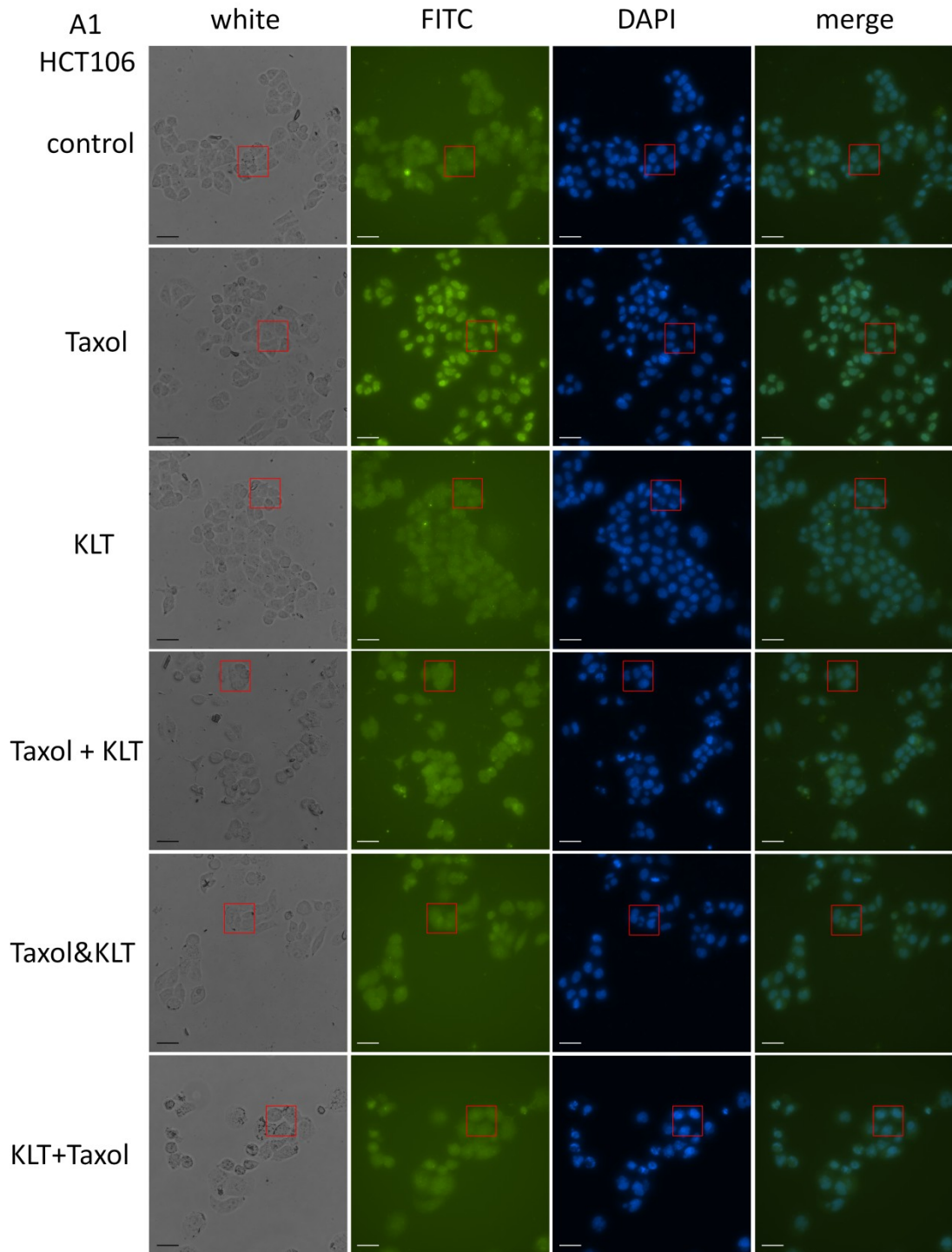
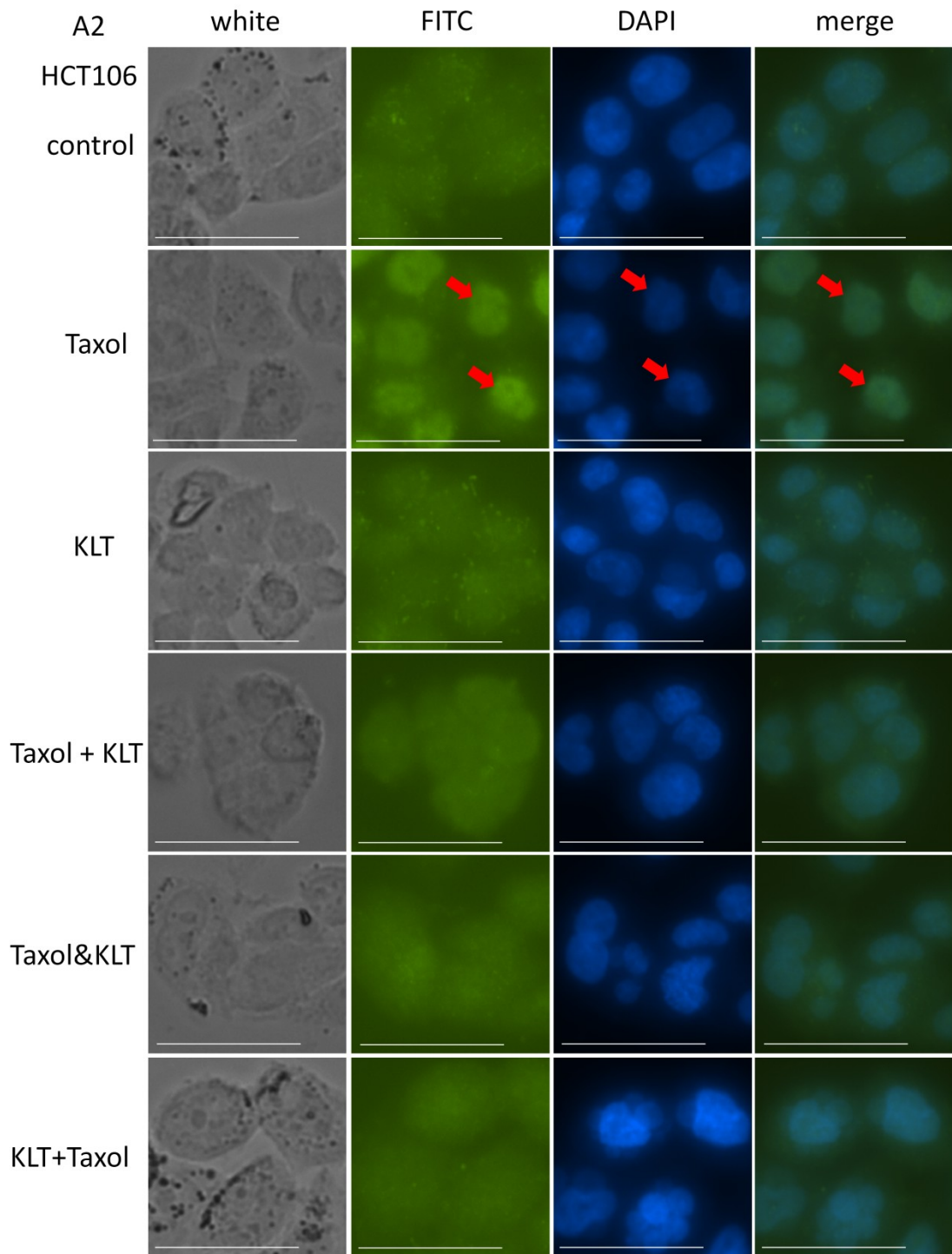
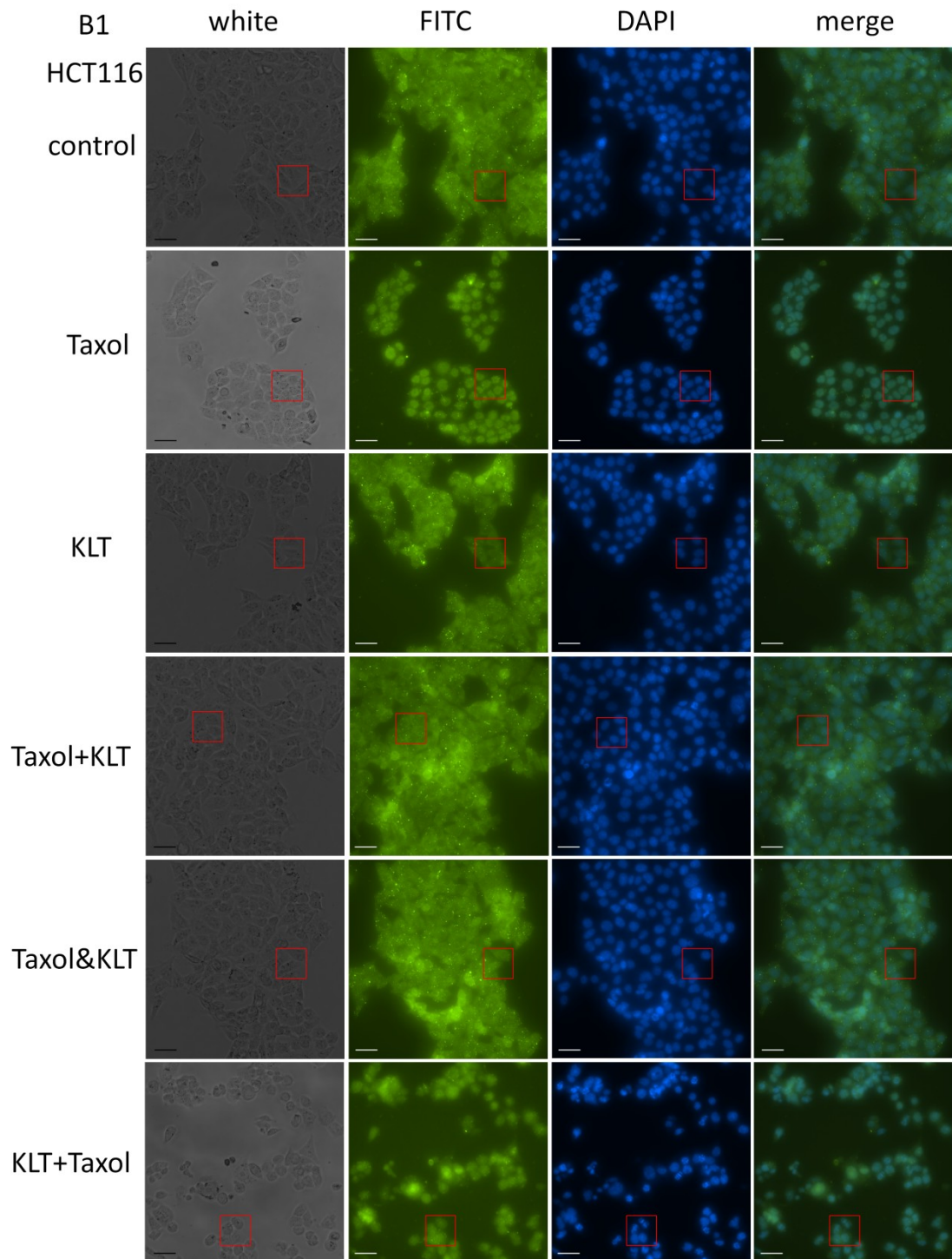
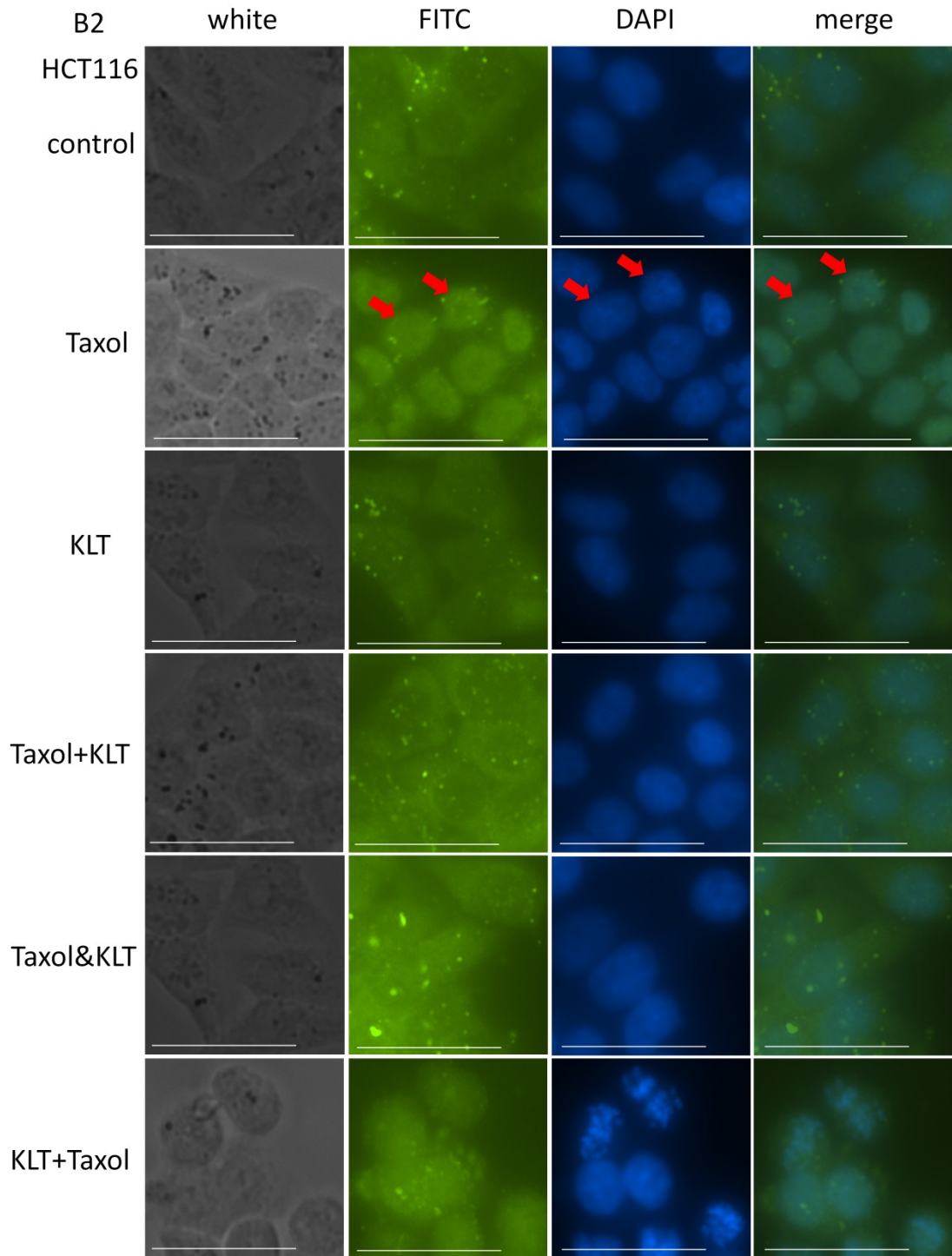


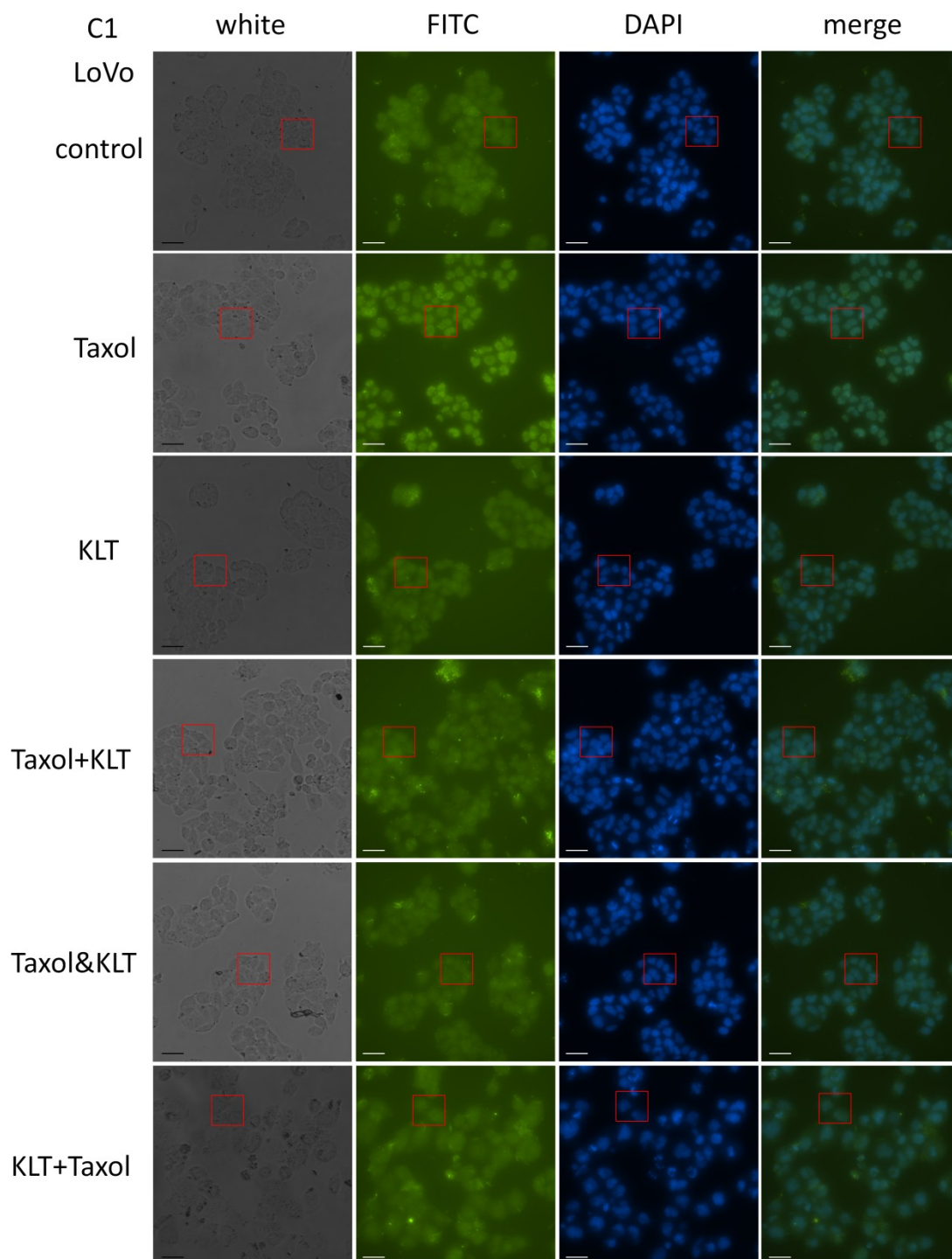
Fig.S1. Fluorescent micrographs of four colorectal cancer cell lines immunostained with α -tubulin antibody followed by FITC-conjugated antibody. Six different drug treatment groups are listed in the left column. These combinations are defined in “Kanglaite and Taxol treatment”. The scale bars represent 20 μ m. (A) HCT106; (B) HCT116; (C) LoVo; and (D) CT26.

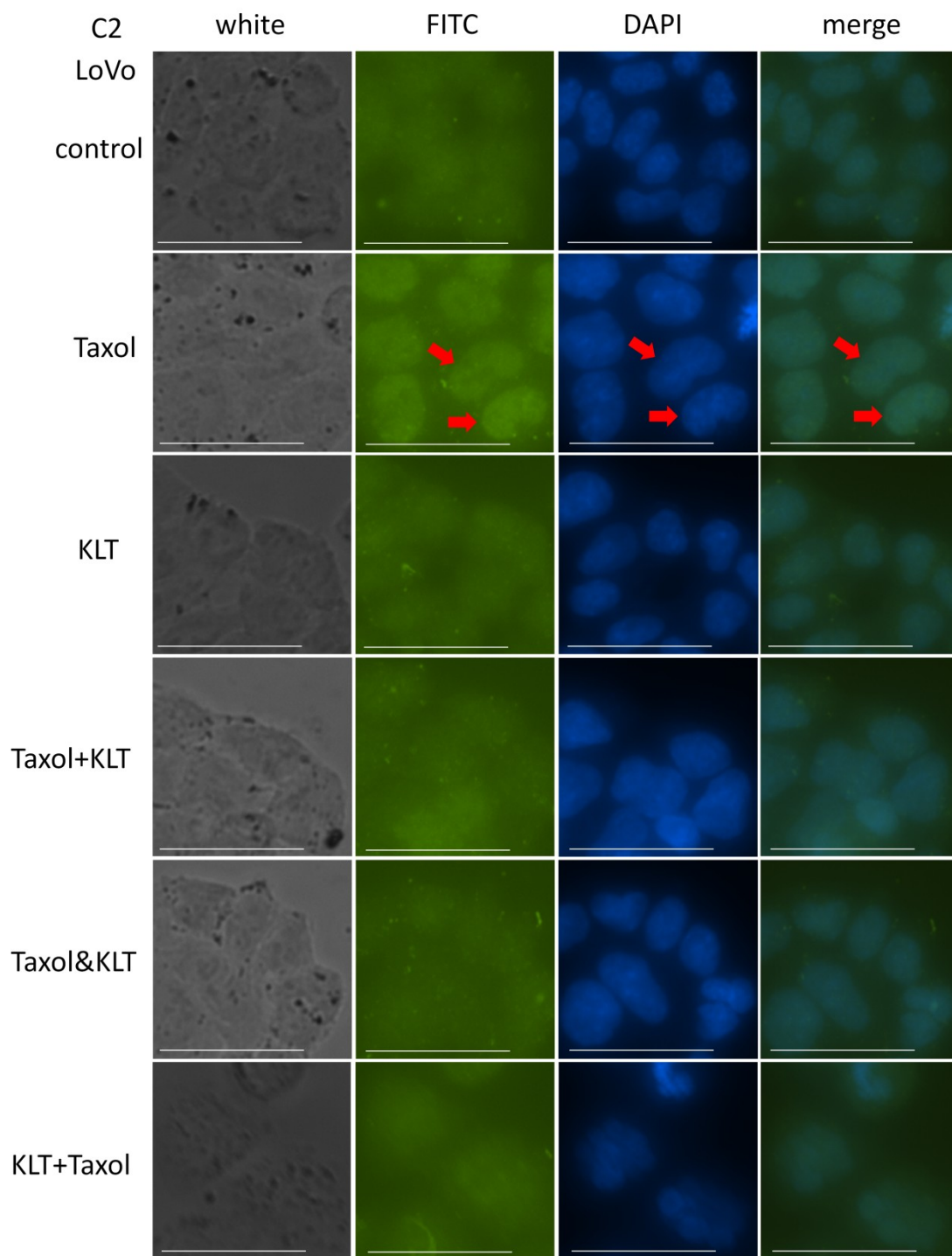


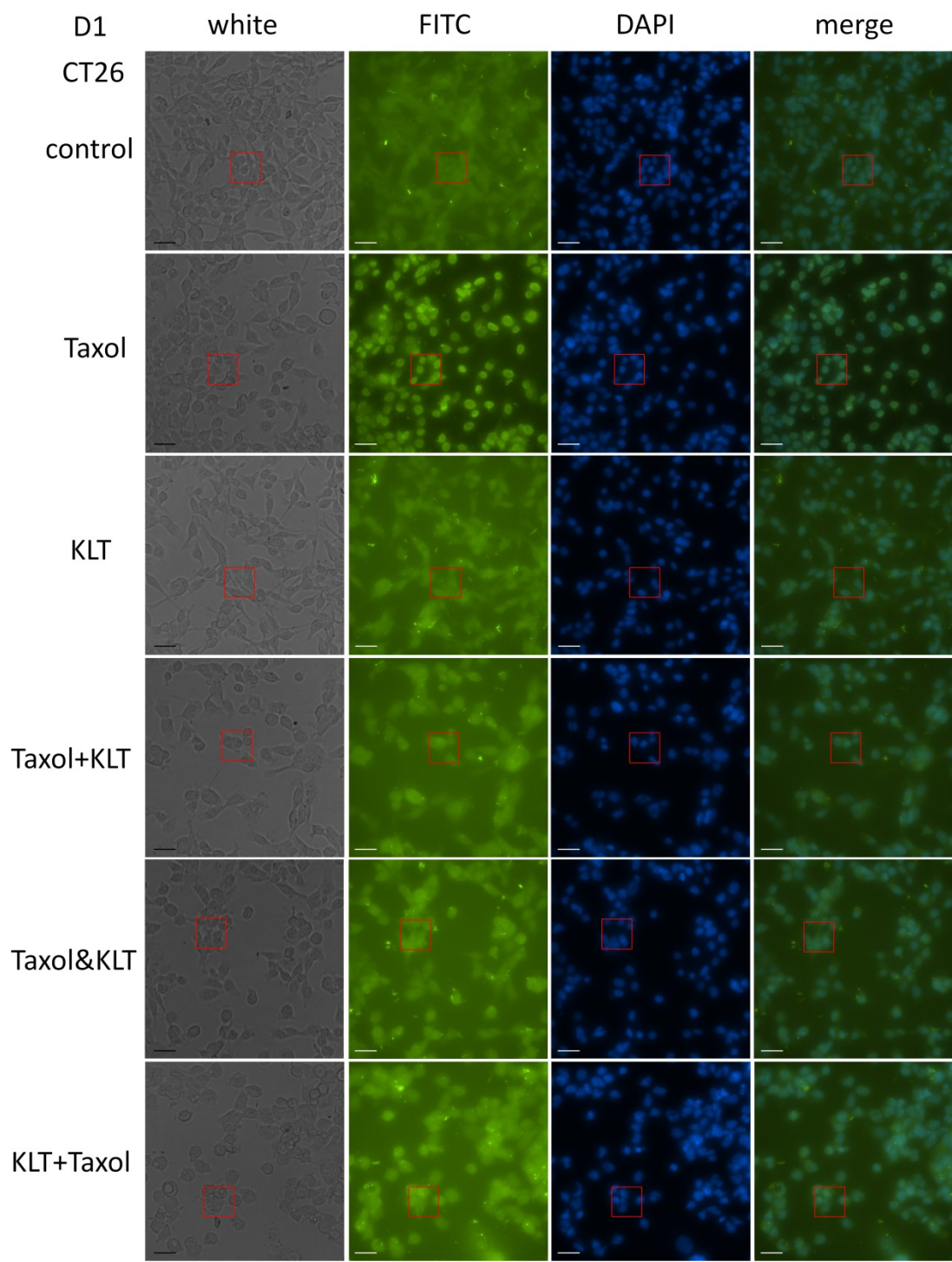












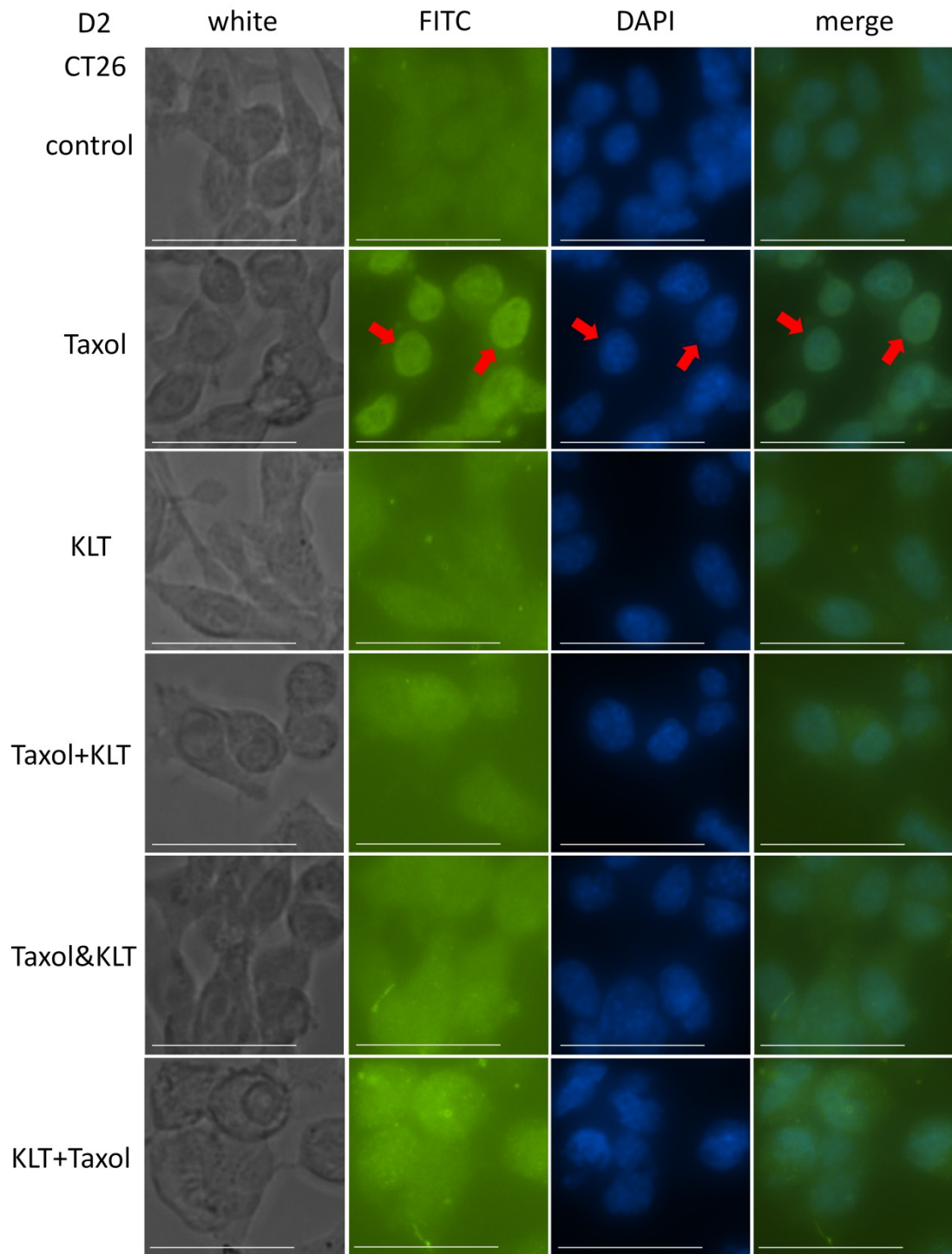


Fig.S2. Fluorescent micrographs of four colorectal cancer cell lines immunostained with NF- κ B antibody followed by FITC-conjugated antibody. The drug treatment groups are listed in the left column and are described in “Kanglaite and Taxol treatment”. Activated NF- κ B is highly expressed in the nuclei by single Taxol treatment, but the combinations containing KLT treatment have almost no activated NF- κ B expression in the nuclei. The scale bars represent 20 μ m. All images in red box are enlarged in order to determine whether NF- κ B is translocated to nuclear. Red arrows indicate that NF- κ B has high expression level in nuclear by comparison of FITC and DAPI stain. (A1) HCT106; (A2) Enlarged images of red box in A1; (B1) HCT116; (B2) Enlarged images of red box in B1; (C1) LoVo; (C2) Enlarged images of red box in C1; (D1) CT26; (D2) Enlarged images of red box in D1.

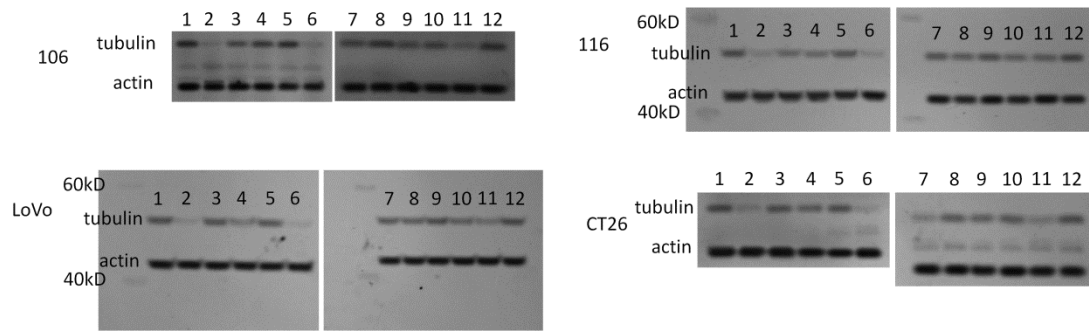


Fig.S3. Full length blots of Fig.2: Western blotting analysis of α -tubulin polymerization in four colorectal cancer cell lines. The number above images represents: 1: control-S; 2: control-P; 3: Taxol-S; 4: Taxol-P; 5: KLT-S; 6: KLT-P; 7: T+K-S; 8: T+K-P; 9: T&K-S; 10: T&K-P; 11: K+T-S; 12:K+T-P. Where “S” represents soluble tubulin and “P” represents polymerized tubulin.

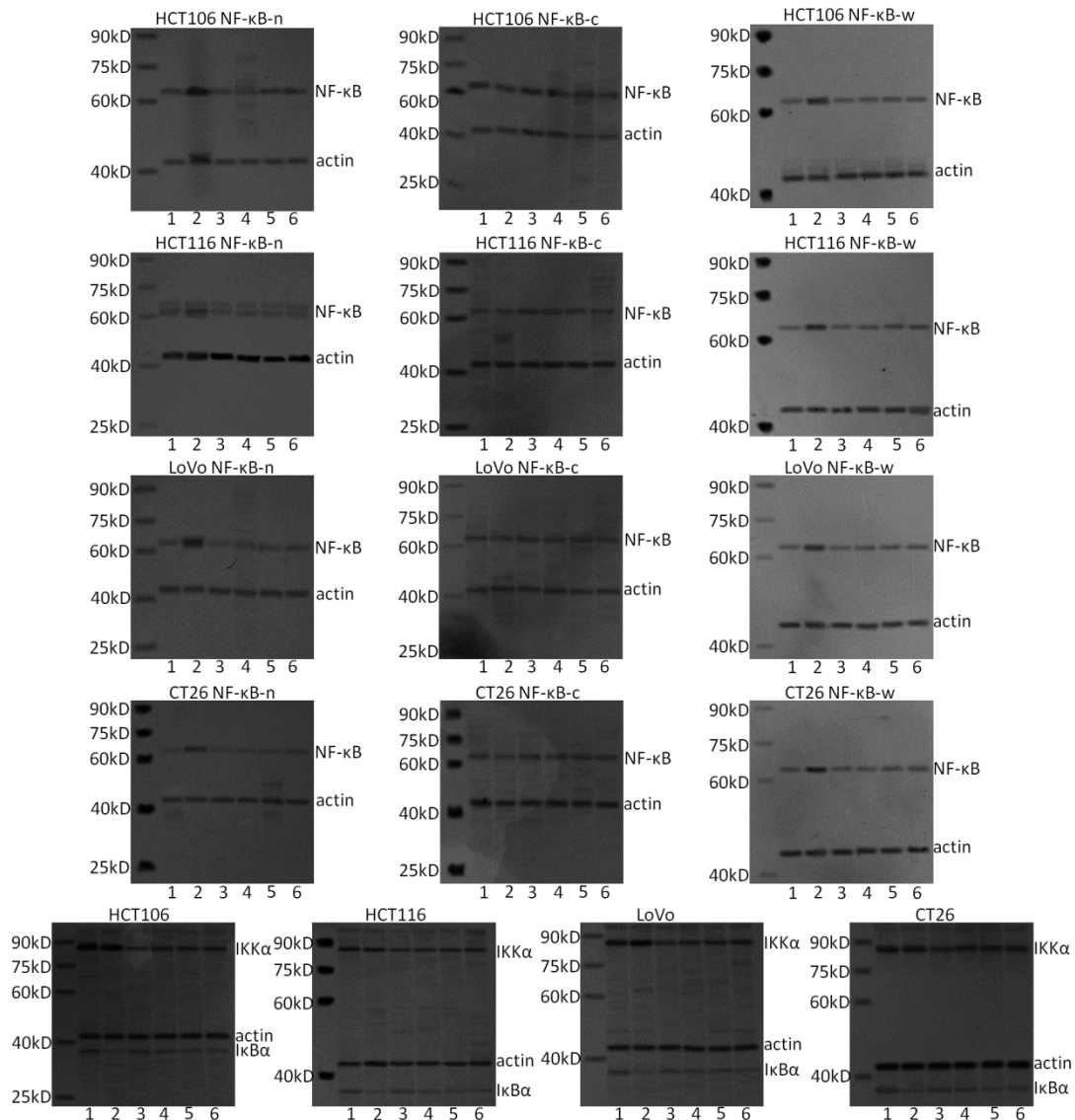


Fig.S4: Full length blots of Fig.3, which include western blotting analysis of NF- κ B, IKK α and I κ B α expression in four colorectal cancer cell lines, HCT106, HCT116, LoVo, and CT26. The numbers represent different treatment groups: 1: control; 2: Taxol; 3: KLT; 4: Taxol+KLT; 5: Taxol&KLT; and 6: KLT+Taxol.

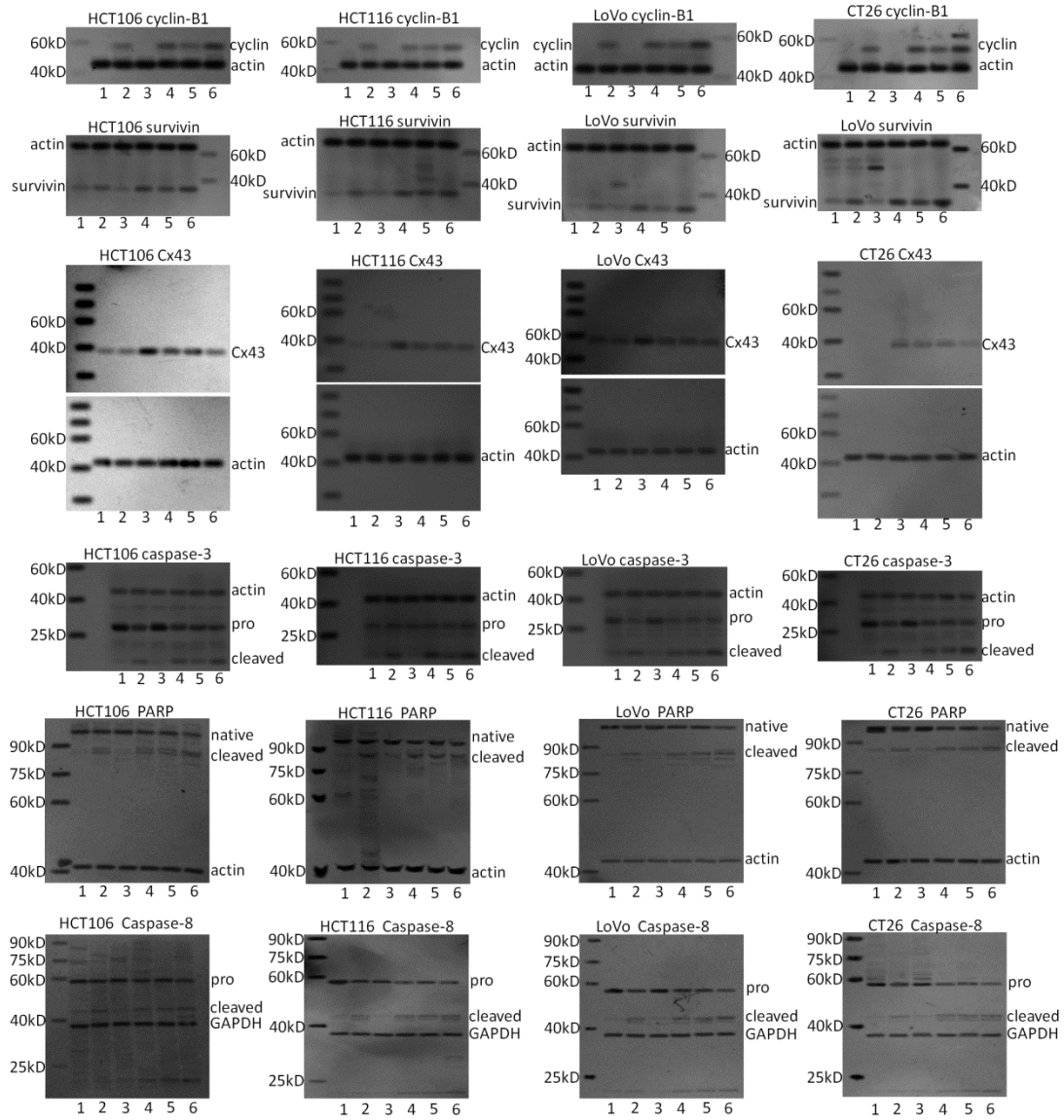


Fig.S5: Full length blots of Fig.4, which include western blotting analysis of cyclin B1, survivin, Cx43, caspase-3, PARP and caspase-8 expression in four colorectal cancer cell lines, HCT106, HCT116, LoVo, and CT26. The numbers represent different treatment groups: 1: control; 2: Taxol; 3: KLT; 4: Taxol+KLT; 5: Taxol&KLT; and 6: KLT+Taxol.