

Figure S1. Broth microdilution analysis using resazurin based assay against *S. aureus*. (a) ATCC 25923 (b) MRSA1 (c) MRSA2 (d) KCTC 13171 (e) ATCC 12228 (f) ATCC 15305 incubated at 37 °C for 18 h. The 96-well plates ($n=3$) were imaged with a digital camera (Samsung NX200, Suwon, Korea). Orange circles indicate MIC for individual experimental sets.

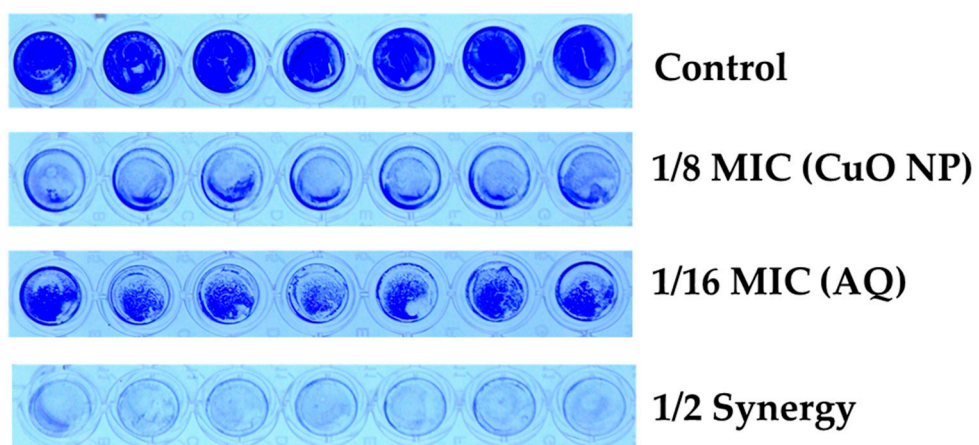


Figure S2. Image of Crystal violet assay. The 96-well plates after CV staining were imaged with a digital camera (Samsung NX200, Suwon, Korea). The quantitative data were shown in **Figure 7a**.

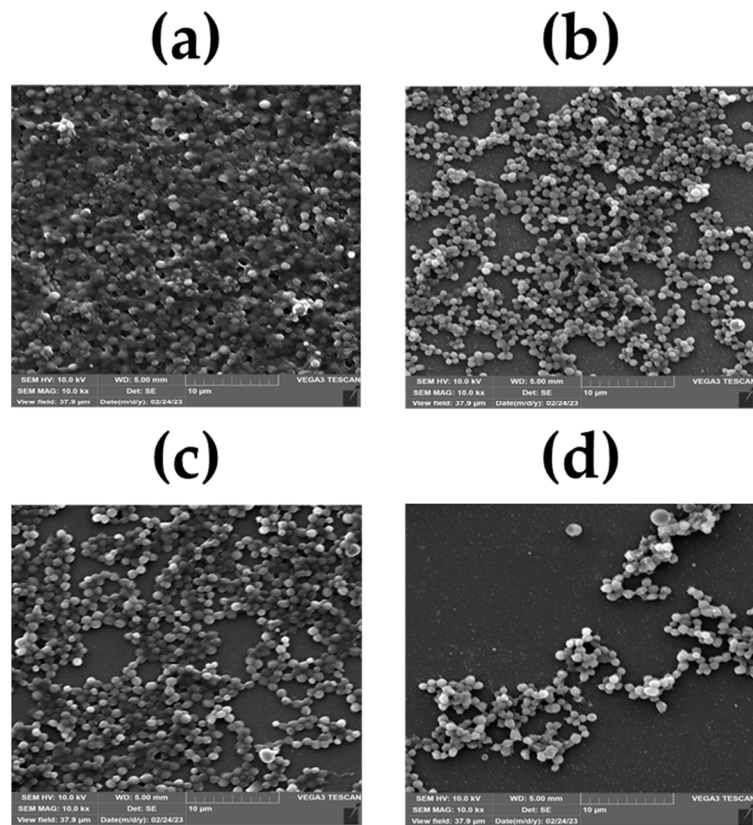


Figure S3. SEM analysis of *S. aureus* (ATCC 25923) biofilm architecture. SEM images of cells from (a) Control, (b) CuO NP (1/8 MIC), (c) AQ (1/16 MIC), and (d) CuO NP/AQ (1/2 Synergy). One of the representatives from $n=3$ was shown.

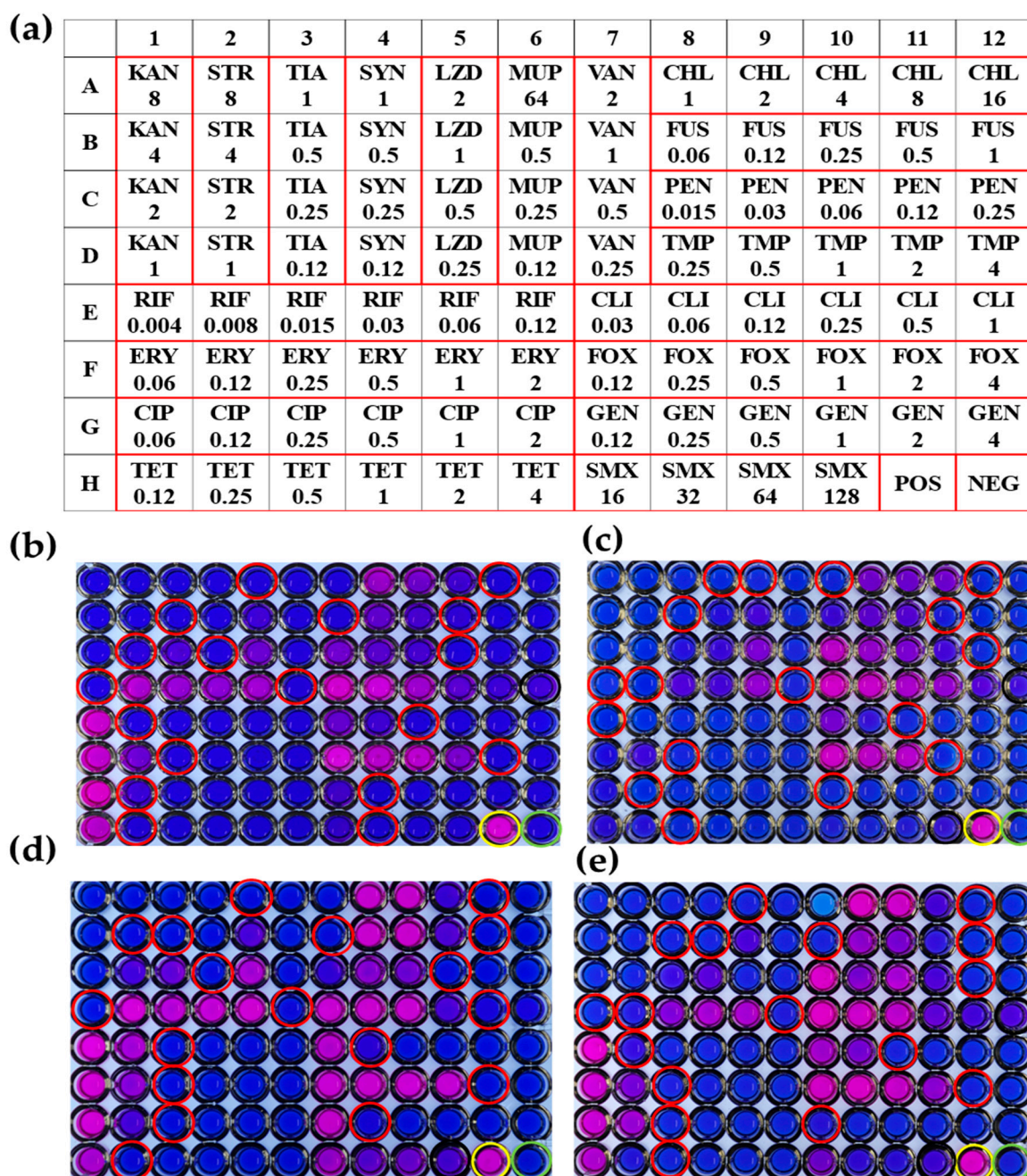


Figure S4. Screening of synergistic antibiotics with CuO NP, AQ, and CuO NP/AQ. (a) Schematic diagram of a Sensititre™ Staphylococci antibiotic susceptible plate (EUST2, Thermo Scientific, Waltham, MA, USA) used in the test. MIC determination of antibiotics with (b) Control, (c) CuO NP, (d) AQ, and (e) CuO NP/AQ against *S. aureus* ATCC 25923. Acronym: KAN, Kanamycin; STR, Streptomycin; TIA, Tiamulin; SYN, Quinupristin/Dalfopristin; LZD, Linezolid; MUP, Mupirocin; VAN, Vancomycin; CHL, Chloramphenicol; FUS, Fusidic; PEN, Penicillin; TMP, Trimethoprim; RIF, Rifampicin; ERY, Erythromycin; CIP, Ciprofloxacin; TET, Tetracycline; CLI, Clindamycin; FOX, Cefoxitin; GEN, Gentamicin; SMX, sulfamethoxazole. Negative and positive controls are circled in green and yellow respectively. The red circles on the plate indicate the MIC for antibiotics. The black circles represent the highest concentration of antibiotics, which did not generate any conclusive result. Yellow and green circles indicate positive and negative control, respectively. One of the representatives from $n=3$ is presented. Representative data set from $n>3$ is shown. The 96-well plates were imaged with a digital camera (Samsung NX200, Suwon, Korea).