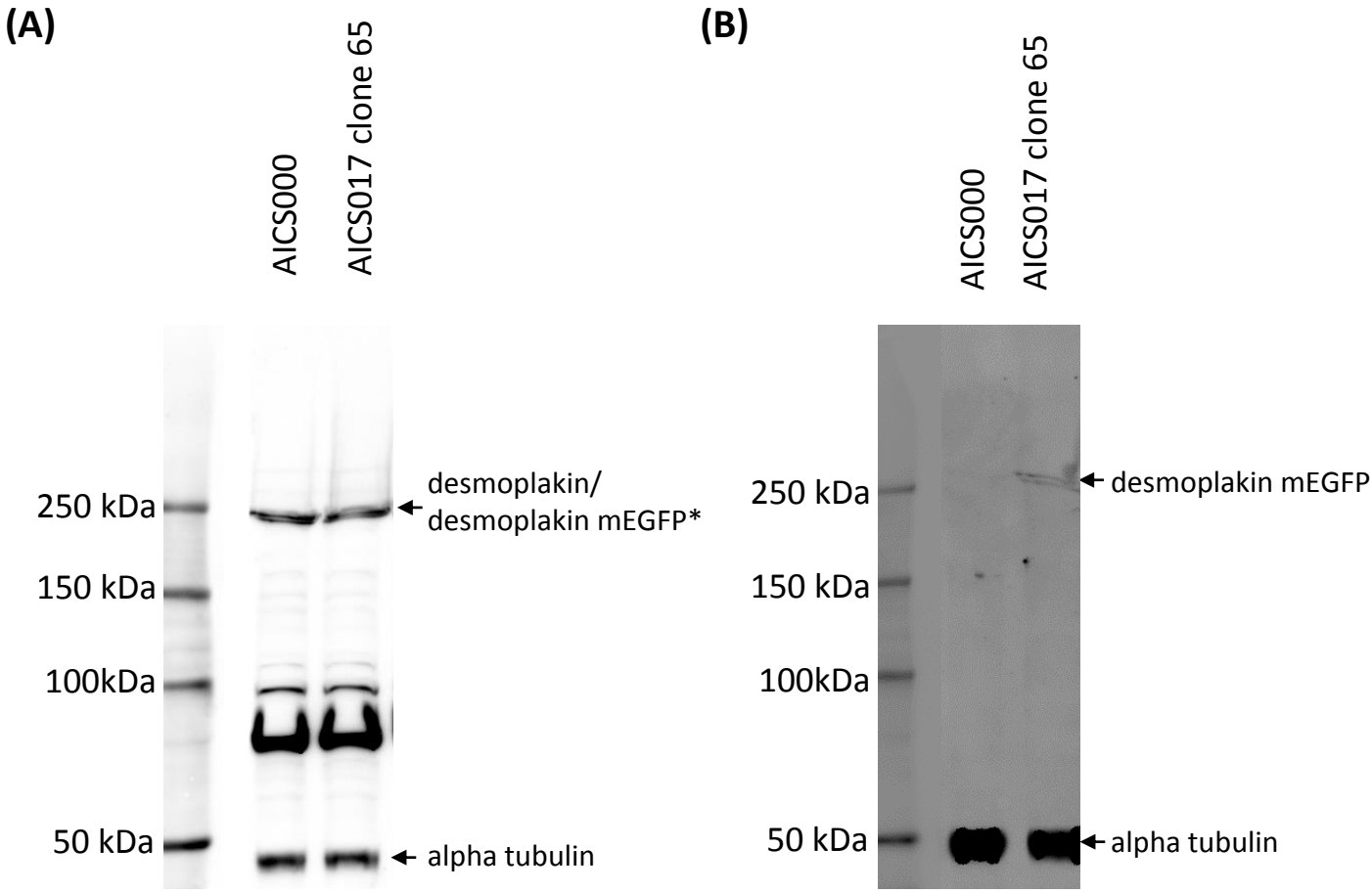

Whole cells lysate was extracted from AICS000 and AICS017 cells using urea sample buffer. 50 µg whole lysate was separated on a NuPGAE Novex 3-8% Tris-Acetate gels and transferred onto 0.45 µm nitrocellulose membranes. Untagged and GFP-tagged desmoplakin was detected using (A) poly rabbit anti-desmoplakin antibody (NW6, Kathleen Green, Northwestern University, 1:1,000 in PBS-T with 5% milk, overnight at 4°C) and (B) mouse monoclonal anti-GFP antibody (Sigma-Aldrich #11814460001; 1:250 in PBS-T with 5% milk, overnight at 4°C). Alpha tubulin was used as loading control (mouse monoclonal anti-alpha tubulin; ThermoFisher #62204; 1:10,000 in PBS-T with 5% milk in PBS-T, overnight at 4°C). A goat polyclonal anti-mouse Alexa 647-conjugated secondary antibody and goat polyclonal anti-rabbit Alexa 647-conjugated antibody were used (1:10,000 in in PBS-T with 5% milk, 2.5 hrs at room temperature). Blots were imaged at different exposure times using the ChemiDoc MP system (BioRad).

*weight difference between wildtype and mEGFP-tagged desmoplakin could not be resolved due to the high molecular weight of the protein and the expression of two desmoplakin isoforms. Consequently semi-quantitative analysis of wild type and mEGFP-tagged protein levels were not possible.