

Supplementary information

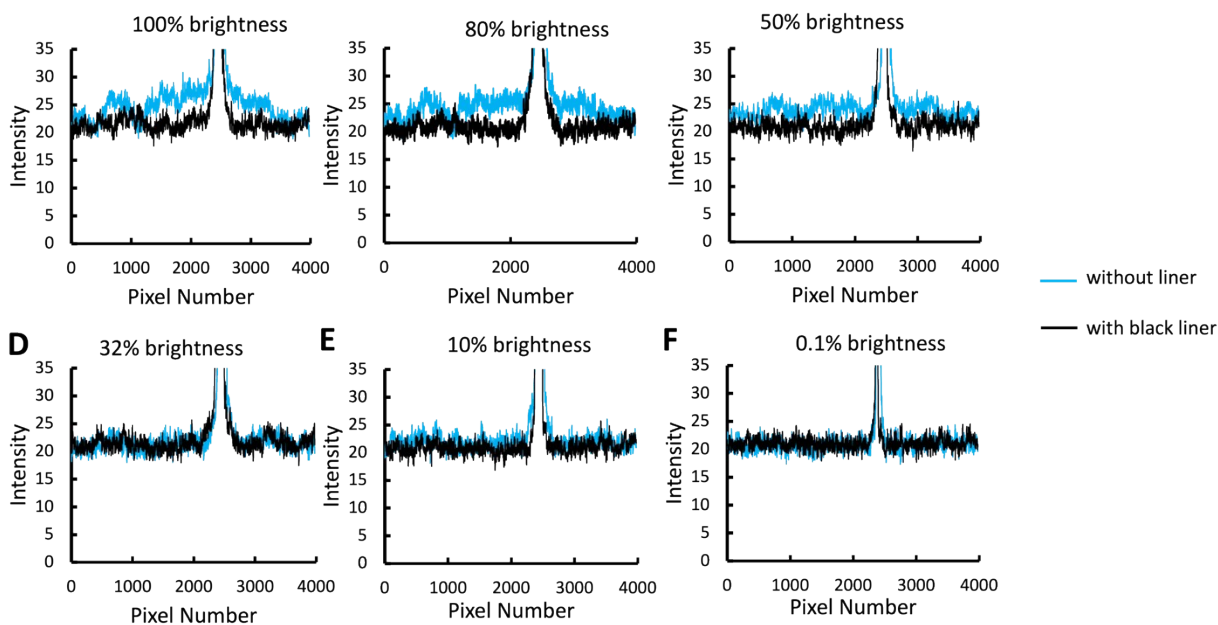


Figure S11. Effect of signal brightness on background. A blue-emitting tritium/scintillator vial was placed in the centre of a 96-well white plate as a constant light source to simulate the glow emission and test for inter-well background. The brightness level was modulated by placing different neutral density filters (Newport, OD 0.1, OD 0.3, OD 0.5, OD 1, and OD 3) on top of the well containing the tritium vial. Images were taken with a Samsung Note 8 smartphone camera in two dark box versions (with and without black felt liner). Graphs (A) to (F) are plots of intensity profile across the width of the 96-well plate with blue lines indicating the unlined dark box, while black lines indicate a dark box with the black liner. (A) no neutral density filter (ND), 100% transmittance; (B) ND 0.1, 80% transmittance; (C) ND 0.3, 50% transmittance; (D) ND 0.5, 32% transmittance; (E) ND 1.0, 10% transmittance; and (F) ND 3.0, 0.1% transmittance. At typical Glow emission intensity (panel D) and below no significant background was observed in other wells.