



**Additional File 3: Optimization of antibodies against p-AMPK (T172) and p-ACC (S79) for immunohistochemistry.** The antibodies for p-AMPK (T172) and p-ACC (S79) were optimized for IHC using MCF-7 cells. Cells were left untreated or treated with 2mM AICAR for 3 hours. p-AMPK (T172) and p-ACC (S79) signal was detected by IHC staining (**A** and **C**) and confirmed by Western blotting (**B** and **D**). Scale bar 30  $\mu$ m (**A**), 60  $\mu$ m (**C**).