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Correction to: Low levels of pyruvate induced by a positive feedback loop protects cholangiocarcinoma cells from apoptosis



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Following publication of the original article [1], the authors reported an error in Fig. 3. The corrected Fig. 3 is given below. Please note that these revisions do not affect the overall conclusions reported in the article. The authors apologise for the error and any inconvenience caused.

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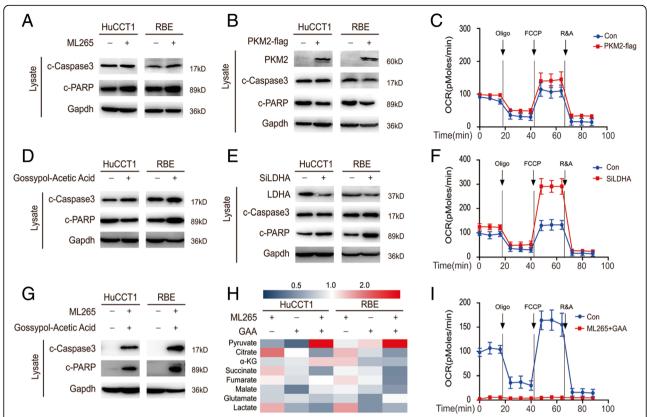


Fig. 3 The changes in metabolic enzymes contribute to the low levels of pyruvate. **a** Cells were treated with 1 μM ML265 for 24 h and subjected to western blot. **b** PKM2 overexpressed cells and their counterparts were subjected to western blot. **c** The oxygen consumption rates (OCR) of PKM2-overexpressed cells and control cells were detected at different time points. OCR under oligomycin, carbonyl cyanide 4-(trifluoromethoxy) phenylhydrazone (FCCP), and antimycin A/rotenone treatments, respectively. **d** Cells were treated with 10 μM Gossypol-Acetic Acid (GAA) for 24 h and subjected to western blot. **e** LDHA knockdown cells and their counterparts were subjected to western blot. **f** The OCR of LDHA knockdown cells and control cells were detected at different time points. **g** Cells were treated with 1 μM ML265 and 10 μM GAA for 24 h, then subjected to western blot. **h** Cells were treated with 1 μM ML265 and 10 μM GAA for 24 h, the concentrations of the metabolites in GC cells were measured by Mass spectrometry (MS) and normalized to their protein level. **i** The OCR of cells were detected at different time points after they treated with 1 μM ML265 and 10 μM GAA for 24 h. Data represent the Mean ± SEM, $n \ge 3$. *p < 0.05, **p < 0.01, NS not significant