**Supplementary Figure 1:** Simultaneous monitoring of  $Ca^{2+}$  and ATP in single mouse beta cells. (A) Representative recording demonstrating that GLP-1 stimulates ATP rises before those of  $Ca^{2+}$  (magnification inset) (n = 5 recordings). (C) As for (A) but tolbutamide as a control to stimulate large excursions in  $Ca^{2+}$  which lead to net ATP consumption (magnification inset) (n = 5 recordings).

