



**Fig.S1. Comparison of single cell luminescence activity in enzymatically dispersed cells from P1.5 pituitary in 10% FBS media and 50% rat serum media**

(A) Graph showing the number of luminescent pulses per cell in a 48 hour time frame (data are represented as mean  $\pm$  s.d.). Data are from 4 independent cultures in 50% rat serum media (RS) and 2 independent cultures in 10% FBS media. (B-D) Comparison of luminescence pulse activity between cells in culture in 10% FBS and cells in culture in 50% rat serum. Direct comparison between pulse amplitude and duration could not be performed because cells in 10% FBS media had higher expression levels and standardisation between pulses was not possible because the baseline of expression was undetectable in cells in 50% rat serum media. Instead the shape of the pulses were compared.

(B) Average luminescence pulse activity. The average pulse shape was determined by centring pulses at their peak and calculating the mean luminescence signal at each point. (C) Example of small, transient luminescence pulses. (D) Example of large, sustained luminescence pulses.