

**Supplementary figure 2. CaBP does not induce Ca<sup>2+</sup> release**. Cytosolic Ca<sup>2+</sup> was monitored following injection with either a non-metabolisable InsP<sub>3</sub> analogue (F-InsP<sub>3</sub>; 100 nM) or CaBP (1 or 8.5  $\mu$ M) in *Xenopus* oocytes. The Ca<sup>2+</sup> indicator dye Oregon Green 488 BAPTA-1 was used. Images were collected using a Noran Oz confocal over a 15 minute period. Oocytes were injected 30 seconds after the start of the experiment. A, for each condition (100 nM F-InsP<sub>3</sub>, 1 $\mu$ M CaBP or 8.5  $\mu$ M CaBP) a spatio-temporal stack of a 10 pixel wide strip is presented (top) as well as a trace of the change in fluorescence from resting levels ( $\Delta$ F/F) for a 10x10 pixel region of interest. B, a bar chart of the percentage of cells exhibiting Ca<sup>2+</sup> release following injection of each of the agents described is presented. The number of oocytes used for each condition is given in the bar chart. The downward deflection observed in the CaBP injected oocytes is due to photo-bleaching of the indicator dye, and was seen in non-injected control oocytes.