

Coixol Exerts an Exclusive Glucose-dependent Insulinotropic Effect in β TC-6 Cells

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Description

β TC-6 cells were incubated in 2 mM and 20 mM glucose in the presence of coixol (200 μ M) for 60 min at 37°C in Krebs-Ringer Bicarbonate buffer. After incubation, cells were fixed with 2% paraformaldehyde, permeabilized with 0.5% Triton X-100, blocked with donkey serum and cells were immunostained for insulin by mouse anti-insulin/Alexa 594-donkey anti-mouse IgG. Images were visualized using a Nikon 90i microscope (Nikon, Japan) and the images were acquired with a Nikon DXM 1200C camera using NIS-Elements image analysis software AR 3.0.

At 2 mM glucose, insulin staining is dispersed throughout the cells (top) suggest that coixol has little to none effects on insulin secretion at low glucose concentration. In sharp contrast, decreased insulin staining was observed by coixol at 20 mM glucose (bottom) suggest that coixol stimulated insulin secretion at high glucose concentration. Additionally, at 20 mM glucose, more insulin staining at the peripheries suggest that the insulin granules are on the way to be secreted. These data suggest that coixol exerts an exclusive glucose-dependent insulinotropic effect in β TC-6 cells (Figure 1).

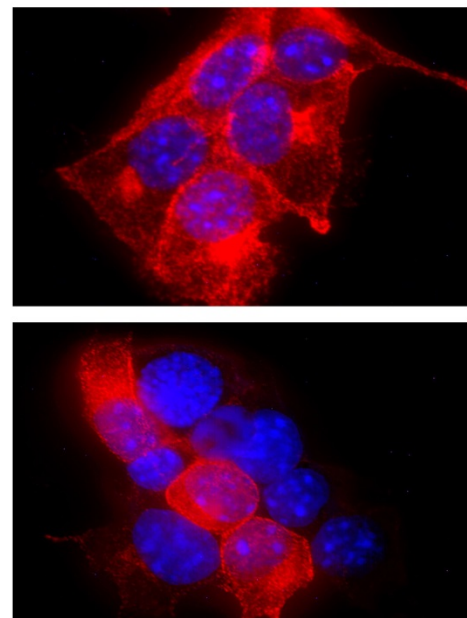


Figure 1: showing coixol exerts an exclusive glucose-dependent insulinotropic effect in β TC-6 cells