

## C115

### Insulin Synthesis and Secretion in Human $\beta$ -cell line derived from the Human Insulinoma Tissue

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Cytoplasmic insulin has been detected and insulin secretory physiology has been characterized in human  $\beta$ -cell line derived from the human insulinoma tissue with immunoelectron microscopy, radioimmunoassay, westernblotting, and differential centrifugation. Glucos- and glucose-plus isobutylmethylxanthine(IBMX)-induced insulin release has occurred distinctively at 5.6 mM-16.7 mM at much similar level to that form normal islets. Immunoelectron microscopy and westernblotting has allowed to detect insulin secretory granules and characterize glucose induced secretory physiology.