

PHYSIOLOGICAL FUNCTIONS OF PANCREATIC CELLS

Cell Type	Product/Hormone	Primary Physiological Function
ENDOCRINE (ISLETS) Alpha ($\hat{\alpha}$) Cells	Glucagon	Stimulates glycogenolysis and gluconeogenesis in the liver to increase blood glucose levels.
ENDOCRINE (ISLETS) Beta ($\hat{\beta}$) Cells	Insulin	Facilitates glucose uptake into cells; promotes glycogenesis and lipogenesis to lower blood glucose.
ENDOCRINE (ISLETS) Delta ($\hat{\delta}$) Cells	Somatostatin	Inhibits the release of both insulin and glucagon; slows gastric emptying and digestive enzyme secretion.
ENDOCRINE (ISLETS) PP Cells (F Cells)	Pancreatic Polypeptide	Regulates pancreatic exocrine secretion and influences appetite and gallbladder contraction.
EXOCRINE (ACINAR) Acinar Cells	Digestive Enzymes	Synthesizes and secretes amylase, lipase, and proteases (trypsinogen) for macronutrient digestion.
EXOCRINE (DUCTAL) Ductal Cells	Bicarbonate & Water	Secretes alkaline fluid to neutralize acidic chyme entering the duodenum from the stomach.