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IN VITRO PHARMACOLOGY

Glucose-Stimulated Insulin Secretion (GSIS) and cAMP Accumulation in Human Primary-like Pancreatic β-cells

For Translational Insights in Metabolic Discovery and Development

RELEVANCE:

- Physiologically relevant functional endpoint with endogenous receptor expression levels
- Evaluates glucose dependent insulin secretion
- Concurrent receptor activation with cAMP assay
- Supports incretin drug development

VALUE:

- Evaluate multiple metabolically relevant receptor pathways (GIPR, GLP1R and GCGR) in a single human β-cell platform
- Measure insulin and cAMP with human pancreatic β-cells in two separate assays
- HTS-compatible screening for rapid compound profiling
- Robust dose-response characterization in a scalable format

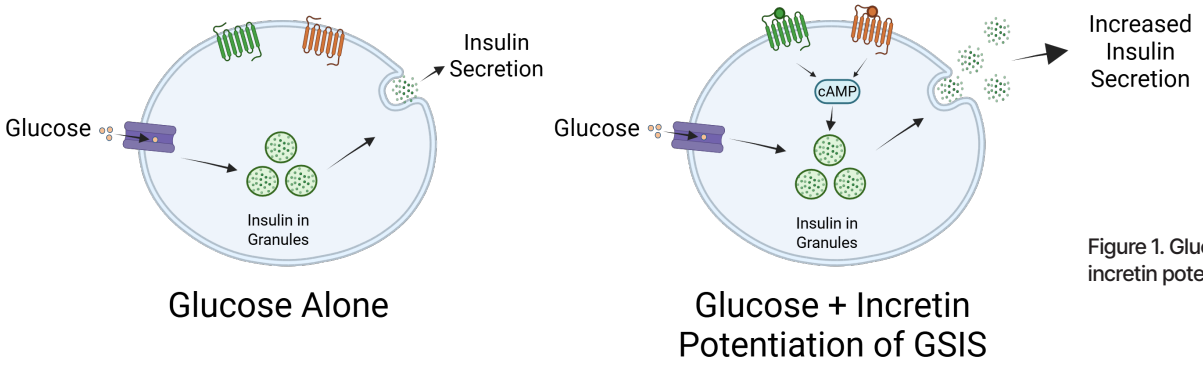
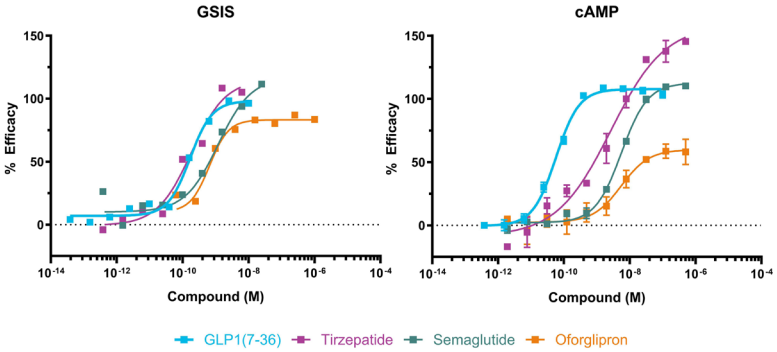


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Figure 1. Glucose alone versus Glucose + incretin potentiation of GSIS.



Assay Name	Description
Human Primary-like Pancreatic Beta Cell-Based Glucose-Stimulated Insulin Secretion GSISscan	Measures GSIS enabling direct evaluation of β-cell responsiveness to insulinotropic compounds
Human Primary-like Pancreatic Beta Cell-Based cAMP (TR-FRET)	Measures cAMP accumulation in human β-cells, providing mechanistic insight into Gs-coupled GPCR activity

Figure 2. GSIS and cAMP agonist assay in Human Primary-Like Pancreatic β-cells.

Advance Your Metabolic Research Program. Explore assay portfolio → eurofinsdiscovery.com/solution/gsis

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