cAMP signaling in diabetes

Elevated blood glucose → Incretins → Islet β-cell

↑Glycogen synthesis
↑Glucose uptake

Insulin

Pancreatic islet

Glucose → Glucose 6-P → ADP → ATP → cAMP → EPAC² → Ca²⁺ → Insulin secretion

Depolarization

Incretins (GLP1, GIP)

Target tissues

Key

- Protein kinase A catalytic subunit
- Protein kinase A regulatory subunit
- cAMP

Unity of opposites

PKA holoenzyme → CnA A9

Phosphatase anchoring → AKAP150


The images in this panel have been published previously (Hinke et al., 2012, EMBO J., 31, 3991-4004).