Glucose homeostasis is regulated by hormones. Elevations in blood glucose levels during feeding stimulate insulin release from pancreatic β cells through a glucose sensing pathway (1). Insulin is synthesized as a precursor molecule, proinsulin, which is processed prior to its secretion. A- and B-peptides are joined by a disulfide bond to form insulin, and the central part of the precursor molecule is cleaved and released as C-peptide. Insulin stimulates glucose uptake from blood into the skeletal muscle and adipose tissue. Insulin deficiency leads to type 1 diabetes mellitus (2).

Specificity/Sensitivity: Insulin Antibody detects endogenous levels of total insulin protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the sequence of human insulin. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

**Recommended Antibody Dilutions:**
- Immunohistochemistry (Paraffin) 1:100
- Immunofluorescence (IF-IC) 1:100
- Immunofluorescence (IF-F) 1:100
- Flow Cytometry 1:100

For application specific protocols please see the web page for this product at www.cellsignal.com

Please visit www.cellsignal.com for a complete listing of recommended companion products.

**Applications**
- IHC-P, IF-IC, IF-F, F

**Species Cross-Reactivity**
- H, M, R

**Molecular Wt.**
- 6 kDa

**Source**
- Rabbit*

*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Entrez-Gene ID** # 3630
**Swiss-Prot Acc.** # P01308

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Flow cytometric analysis of untreated β-TC cells, using Insulin Antibody (blue) compared to a nonspecific negative control antibody (red).

Immunohistochemical analysis of paraffin-embedded human pancreas, showing staining of β cells, using Insulin Antibody.

Immunohistochemical analysis of paraffin-embedded mouse pancreas, showing staining of β cells, using Insulin Antibody.

Immunohistochemical analysis of paraffin-embedded rat pancreas, showing staining of β cells using Insulin Antibody.

For Research Use Only. Not For Use In Diagnostic Procedures.
Confocal immunofluorescent analysis of β-TC-6 and HeLa cells using Insulin Antibody (green). Actin filaments have been labeled with Alexa® Fluor 555 phalloidin (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).

Confocal immunofluorescent analysis of normal mouse pancreas using Insulin Antibody (green). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).