

Product Information

Anti-Insulin antibody, Mouse monoclonal
clone K36AC10, purified from hybridoma cell culture

Product Number **SAB4200691**

Product Description

Anti-Insulin antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the K36AC10 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Human insulin was used as the immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Anti-Insulin antibody, Mouse monoclonal recognizes human, monkey, porcine, dog, rabbit, bovine, horse, sheep, rat, guinea pig and cat insulin and human proinsulin.¹⁻³ The antibody may be used in various immunochemical techniques including Radioimmunoassay (RIA)⁵, Immunoblotting,⁴ Immunocytochemistry^{1,5,6} and Immunohistochemistry. The antibody binds insulin with an affinity constant of 8.8×10^9 L/M in RIA.^{5,6}

Insulin is a 51-amino acid polypeptide composed of A and B chains connected by disulfide bonds⁷ and stored mainly in pancreatic islets. Proinsulin precursor, which has very little intrinsic biological activity, is a single-chain molecule consisting of A and B chains connected through the C-peptide. Insulin is one of the major regulatory hormones of intermediate metabolism throughout the body. The biological actions of this hormone involve integration of carbohydrate, protein and lipid metabolism. Insulin enhances membrane transport of glucose, amino acids and certain ions. It also promotes glycogen storage, formation of triglycerides and synthesis of proteins and nucleic acids. Deficiency of insulin results in diabetes mellitus, one of the leading causes of morbidity and mortality in the general population. Insulin is also present in tumors of β -cell origin such as insulinoma. Insulin-specific antibodies prove useful as β -cell and tumor markers using immunohistochemical techniques and as analytical tools in quantification of the hormone.¹⁻⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a working concentration of 10 μ g/mL is recommended using heat-retrieved formalin-fixed, paraffin-embedded human pancreas sections and Biotin/ExtrAvidin®-Peroxidase staining system.

Immunofluorescence: a working concentration of 2.5–5 μ g/mL is recommended using β -TC-6 (Mouse Embryo Pancrease Insulinoma) cells.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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4. Absood A., et al., *PLoS One.*, **8**, e54351 (2013).
5. Witt S., et al., *Acta Histochem Suppl.*, **35**, 217-23 (1988).
6. Keilacker H., et al., *Biomed. Biochim. Acta*, **45**, 1093-102 (1986).

7. Lechago J., and Shah I., *Atlas of Diagnostic Immunohistopathology*, True, L. (Ed.), Chapter 14, J.B. Lippincott Co., Philadelphia (1990).

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