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ProductInformation

MONOCLONAL ANTI-GLUCAGON
Clone K79bB10
Mouse Ascites Fluid

Product No. **G 2654**

Product Description

Monoclonal Anti-Glucagon (mouse IgG1 isotype) is derived from the K79bB10 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Polymerized porcine glucagon was used as the immunogen. The isotype was determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-Glucagon reacts with pancreatic glucagon in RIA and immunocytochemistry.[1] The affinity constant of 6.1 x 10^8 L/M in RIA. The antibody weakly cross-reacts with gut glucagon (enteroglucagon) in an immunohistological assay. It may be used for the immunocytochemical staining of Bouin-fixed and formalin-fixed, paraffin-embedded pancreatic tissue sections. Cross-reactivity has been observed with glucagon-containing cells in fixed sections of pancreas from human, porcine, dog, rabbit, mouse, rat, guinea pig, and cat. It may also be used in RIA and dot blot technique (native and denatured).

Glucagon is a 29-residue polypeptide hormone (MW 3482), produced in the pancreas.[2] A related hormone, enteroglucagon (or oxyntomodulin), which is produced in the mucosa of the small and large intestine, consists of the 29 amino acid sequence of pancreatic glucagon extended by 8 additional residues at the C-terminus. The biological activities of pancreatic glucagon include glycogenolysis, lipolysis, gluconeogenesis, and ketogenesis, which are antagonistic effects to those of insulin action, thus leading to increased blood glucose levels. Immunocytochemical studies have revealed the presence of pancreatic glucagon inside the A or α cells, which constitute 15-20% of the islet cell population. These cells are located preferentially at the periphery of the human pancreatic islets. Pathological manifestations of the glucagon-type peptide reside almost exclusively with the existence of tumors or glucagonomas, as no states of glucagon-cell deficiency or hyperplasia have been identified. Glucagon-specific antibodies would prove useful as an α cell and tumor markers applying immunohistochemical techniques, and as an analytical tool in quantification of the hormone.

Reagents

The product is provided as ascites fluid containing 0.1% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazards and safe handling practices.

Product Profile

A minimum working dilution of 1:2,000 was determined by indirect immunoperoxidase labeling of formalin-fixed, paraffin-embedded sections of human or animal pancreas.

In order to obtain best results, it is recommended that each individual user determine their working dilution by titration assay

Storage

For continuous use, store at 2-8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Repeated freezing and thawing is **not** recommended. Storage in "frost-free" freezers is **not** recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

References

1. Witt, S., et al., Acta Histochem., **Suppl XXXV**, 217 (1988).
2. Lechago, J., and Shah, I., in: Atlas of Diagnostic Immunohistopathology, True, L. (ed.), Chapter 14, J.B. Lippincott Co., Philadelphia (1990)

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