

Product Information

Anti-Laminin Antibody, Mouse Monoclonal

Clone LAM-89, Purified from Hybridoma Cell Culture

L8271

Product Description

Monoclonal Anti-Laminin (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified human laminin was used as the immunogen. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Specificity was determined by immunohistochemistry and immunofluorescent labeling of protease-digested, formalin-fixed, paraffin-embedded human or animal tissue sections, localizing specifically the basal membrane of blood vessels, epithelium, nerve, and muscle fibers. Antigen unmasking is critical in using this product. The antibody stains basal membranes of human, pig and cat, but not of rabbit, sheep, dog, goat, rat, guinea pig, chicken, frog, snake, carp, and lizard. In a dot blot assay, the product shows no reaction with Collagen IV, fibronectin, vitronectin or chondroitin sulfate types A, B, and C. The monoclonal antibody will react with purified human laminin in ELISA.

Monoclonal Anti-Laminin may be used in immunohistochemistry to mark blood vessel walls in different species, to classify various disease processes involving basement membranes, to identify the origin of human tumors and their classification, and to distinguish between invasive and non-invasive lesions.

Laminin, the most abundant structural and biologically active component in basement membranes, is a complex extracellular glycoprotein with an approximate molecular weight of 900 kDa. It plays an important role in many aspects of the cell biology. Laminin is composed of one A chain (400 kDa), one B1 chain (215 kDa) and one B2 chain (205 kDa), all held together by disulfide bonds. The molecule has a cross-like form with globular units near the ends of each chain, the sites where it is bound to Collagen IV, heparan sulfate, proteoglycan as well as to the surface of epithelial cells.

Laminins from various species have common antigenic determinants. Laminin is only found in significant quantities in basement membranes, the thin extracellular matrices that surround epithelial tissue, nerve, fat cells and smooth, striated and cardiac muscle. It has been found to modulate cell differentiation, cell shaping and also cell movement because it appears to be an important cell substrate adhesion protein. Variations in the expression of this protein have been observed in embryogenesis, organogenesis, post traumatic healing and cancer. The greatest interest in laminin has been provoked by the discovery of its ability to promote neurite regeneration. Quantitation of laminin is beneficial by allowing for a method of non-invasive testing. For example, in fibrosis, a serious and frequent complication of chronic active liver disease characterized by excessive deposition of various normal components of connective tissue in liver, the concentration of laminin in serum is positively related to the severity of the fibrotic liver disease being significantly higher in cirrhosis than in mere fibrosis.

Reagents

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 15 mM sodium azide as a preservative.

Product Profile

Immunohistochemistry

The minimum antibody titer of 1:2,000 was determined by staining of protease-digested, formalin-fixed, paraffin-embedded human tissue.

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

Storage

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

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.

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