3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

Anti-Collagen IV antibody, Mouse monoclonal
clone J3-2, purified from hybridoma cell culture

Catalog Number **SAB4200500**

Product Description

Anti-Collagen IV (mouse IgM isotype) is derived from the hybridoma J3-2 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a placenta preparation rich in basement membrane collagen.[1] The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Anti-Collagen IV recognizes human, monkey, bovine, dog, rat and mouse collagen IV. The product may be used in several immunochemical techniques including immunoblotting (~170kDa), immunocytochemistry, immunohistochemistry, immunoprecipitation and ELISA.[1]

The composition of the extracellular framework of all vertebrates is dominated by a class of molecules known as collagens, each with a unique feature suited to its function and location.[2] A member of this family, collagen IV, is the primary collagen found in the extracellular basement membranes separating a variety of epithelial and endothelial cells. It is a major component of the dermal–epidermal junction, where it is mostly found in the lamina densa. Collagen IV is a heterotrimeric molecule containing two α1-like and one α2-like chains. Multiples diseases have been associated with the molecule including Alport and Goodpasture's syndrome, as well as several rheumatological and dermatological diseases including acquired epidermolysis bullosa.[3] Many malignancies have been associated with increased degradation of type IV collagen. Morover, types I and IV collagens can induce chemoresistance by directly interacting with integrins on cancer cells. Nevertheless, non-collageneous domains of collagen IV released by proteolysis can also inhibit tumor angiogenesis.[2]

Reagent

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

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at −20 °C 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. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1.0-2.0 μg/mL is recommended using human placenta extracts.

Immunohistochemistry: a working concentration of 2.0-4.0 μg/mL is recommended using human liver tissue sections.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Sundarraj, N., and Willson, J., *Immunology*, **10**, 133-140 (1982).
2. Egeblad, M., et al., *Curr. Opin. Cell Biol.*, **22**, 697-706 (2010).
3. Abreu-Velez, A.M., and Howard, M.S., *N. Am. J. Med. Sci.*, **4**, 1-8 (2012).

RC,GG,KCP,PHC 04/21-1