

Polyclonal Anti-COL4A1 Antibody

Catalog Number: PA1536

Description

Gene Name	collagen, type IV, alpha 1
Recommended Protein Name	Collagen alpha-1(IV) chain
Lot No.	0151112c0136121
Size	100µg/vial
Form	lyophilized
Ig type	Rabbit IgG
Specificity	No cross reactivity with other proteins.
Purification	Immunogen affinity purified.
Species	Reacts with: human, rat Predicted to work with: mouse
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human COL4A1(1654-1669aa ELRTHVSRQVCMRRT), identical to the related rat and mouse sequence.
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg Thimerosal, 0.05mg NaN ₃ .

Application

	Concentration	Tested Species	Predicted Species	Antigen Retrieval
Western blot	0.1-0.5µg/ml	Hu, Rat	Ms	-

Tested Species: In-house tested species with positive results.

Predicted Species: Species predicted to be fit for the product based on sequence similarities.

Other applications have not been tested.

Optimal dilutions should be determined by end users.

Preparation and storage

Reconstitution: 0.2ml of distilled water will yield a concentration of 500µg/ml.

Storage: At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for a longer time.

Avoid repeated freezing and thawing.

Relevant detection systems

Boster provides a series of assays reacted with primary antibodies. Antibody can be supported by chemiluminescence kit EK1002 in WB.

Background

Collagen alpha-1(IV) chain is a protein that in humans is encoded by the COL4A1 gene. Type IV collagen is the major structural component of glomerular basement membranes (GBM), forming a 'chicken-wire' meshwork together with laminins, proteoglycans and entactin/nidogen. Like the other members of the type IV collagen gene family, this gene is organized in a head-to-head conformation with another type IV collagen gene so that each gene pair shares a common promoter. Mutations in COL4A1 exons 24 and 25 are associated with HANAC (autosomal dominant hereditary angiopathy with nephropathy, aneurysms, and muscle cramps).

Reference

1. Mayne, R., Wiedemann, H., Irwin, M. H., Sanderson, R. D., Fitch, J. M., Linsenmayer, T. F., Kuhn, K. Monoclonal antibodies against chicken type IV and V collagens: electron microscopic mapping of the epitopes after rotary shadowing. *J. Cell Biol.* 98: 1637-1644, 1984.
2. Solomon, E., Hiorns, L. R., Spurr, N., Kurkinen, M., Barlow, D., Hogan, B. L. M., Dalgleish, R. Chromosomal assignments of the genes coding for human types II, III and IV collagen: a dispersed gene family. *Proc. Nat. Acad. Sci.* 82: 3330-3334, 1985.
3. Sudhakar, A., Nyberg, P., Keshamouni, V. G., Mannam, A. P., Li, J., Sugimoto, H., Cosgrove, D., Kalluri, R. Human alpha-1 type IV collagen NC1 domain exhibits distinct antiangiogenic activity mediated by alpha-1-beta-1 integrin. *J. Clin. Invest.* 115: 2801-2810, 2005.