

Datasheet: 2150-0140

BATCH NUMBER 157406

Description:	RABBIT ANTI HUMAN COLLAGEN IV
Specificity:	COLLAGEN IV
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	0.5 ml

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Immunohistology - Frozen	▪			1/10 - 1/50
Immunohistology - Paraffin (1)	▪			1/10 - 1/50
ELISA	▪			1/1.5K - 1/6K
Western Blotting			▪	
Immunofluorescence	▪			1/10 - 1/50

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using the appropriate negative/positive controls.

(1) Pretreatment is required with 1 mg/ml pepsin in 0.5 M acetic acid for two hours at 37°C and multiple buffer washes.

Target Species	Human
Product Form	Purified IgG - lyophilised
Reconstitution	Use 500 µl sterile distilled water.
Preparation	Purified IgG prepared by affinity chromatography on immobilized human collagen type IV
Buffer Solution	0.15M Sodium Chloride 0.01M Sodium Phosphate
Preservative	1% Mannitol

Stabilisers 1% Dextran

Immunogen Collagen type IV from human placenta.

External Database Links

UniProt:

[P02462](#) [Related reagents](#)
[P08572](#) [Related reagents](#)
[Q01955](#) [Related reagents](#)
[P53420](#) [Related reagents](#)
[P29400](#) [Related reagents](#)
[Q14031](#) [Related reagents](#)

Entrez Gene:

[1282](#) COL4A1 [Related reagents](#)
[1284](#) COL4A2 [Related reagents](#)
[1285](#) COL4A3 [Related reagents](#)
[1286](#) COL4A4 [Related reagents](#)
[1287](#) COL4A5 [Related reagents](#)
[1288](#) COL4A6 [Related reagents](#)

RRID AB_2082644

Specificity

Rabbit anti Human collagen IV antibody recognizes human collagen IV, also known as Collagen alpha-1(IV) chain. Collagen IV is a 1497 amino acid structural extracellular matrix protein and key component of the glomerular basement membrane. Arresten, comprising the c-terminal 225 amino acids of collagen IV demonstrates potent anti tumorigenic and anti angiogenic properties ([Nyberg et al. 2008](#)). Rabbit anti Human collagen IV antibody exhibits the following reactivities with Collagen IV and related proteins:

Human collagen IV 100%
Human types I, III and V < 10%
Human collagen II <1%

Human plasma proteins do not interfere with collagen binding.

Defects in the COL4A1 gene encoding collagen 4 can lead to the presentation of a variety of conditions including Brain small vessel disease with or without ocular anomalies ([BSVD](#)), demonstrating weakened brain blood vessels and retinal arteriolar tortuosity ([Shah et al. 2010](#)). Hereditary angiopathy with nephropathy aneurysms and muscle cramps ([HANAC](#)), characterized by large renal cysts and hematuria ([Plaisier et al. 2010](#)). Porencephaly 1 ([POREN1](#)), a neurologic disease characterized by fluid filled cysts within the cerebral hemispheres, visual defect and facial paresis ([Gould et al. 2005](#)). Schizencephaly ([SCHZC](#)) presenting with full thickness cleft within the cerebral hemispheres, some of the hemispheres may also be absent, replaced by cerebrospinal fluid ([Yoneda et al. 2013](#)). Other conditions resulting from mutations in the COL4A1 gene

also exist presenting with some of the features described for the above conditions.

References

1. Jones, E.A.V. *et al.* (2008) Separating genetic and hemodynamic defects in neuropilin 1 knockout embryos. [Development. 135: 2479-88.](#)
2. Cunningham, K. *et al.* (2011) Conditional deletion of Ccm2 causes hemorrhage in the adult brain: a mouse model of human cerebral cavernous malformations. [Hum Mol Genet. 20: 3198-206.](#)
3. Reis, M. *et al.* (2012) Endothelial Wnt/ β -catenin signaling inhibits glioma angiogenesis and normalizes tumor blood vessels by inducing PDGF-B expression. [J Exp Med. 209: 1611-27.](#)
4. Powner, M.B. *et al.* (2010) Perifoveal müller cell depletion in a case of macular telangiectasia type 2. [Ophthalmology. 117: 2407-16.](#)
5. Dunér, P. *et al.* (2015) Increased aldehyde-modification of collagen type IV in symptomatic plaques - A possible cause of endothelial dysfunction. [Atherosclerosis. 240 \(1\): 26-32.](#)
6. Powner, M.B. *et al.* (2016) Evaluation of Nonperfused Retinal Vessels in Ischemic Retinopathy. [Invest Ophthalmol Vis Sci. 57 \(11\): 5031-7.](#)

Storage

Store at -20°C only.
Storage in frost-free freezers is not recommended.
Avoid repeated freezing and thawing as this may denature the antibody.

Guarantee

Guaranteed until date of expiry. Please see product label.

Health And Safety Information

Material Safety Datasheet documentation #20472 available at:
<https://www.bio-rad-antibodies.com/SDS/2150-0140>
20472

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)

Sheep Anti Rabbit IgG (STAR35...) [RPE](#)

Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)

Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)

'M374984:201210'

Printed on 20 Mar 2024