

## Datasheet: 2150-0140

<b>Description:</b>	RABBIT ANTI HUMAN COLLAGEN IV
<b>Specificity:</b>	COLLAGEN IV
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	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](http://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.**

<b>Target Species</b>	Human
<b>Product Form</b>	Purified IgG - lyophilised
<b>Reconstitution</b>	Use 500 µl sterile distilled water.
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on immobilized human collagen type IV
<b>Buffer Solution</b>	0.15M Sodium Chloride 0.01M Sodium Phosphate
<b>Preservative</b>	1% Mannitol
<b>Stabilisers</b>	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/ $\beta$ -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.](#)

---

<b>Storage</b>	Store at -20°C only. Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody.
<b>Guarantee</b>	Guaranteed until date of expiry. Please see product label.
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20472 available at: 20472: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/20472.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/20472.pdf</a>
<b>Regulatory</b>	For research purposes only

---

## Related Products

### Recommended Secondary Antibodies

- Sheep Anti Rabbit IgG (STAR34...) [FITC](#)  
Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)  
Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)  
Sheep Anti Rabbit IgG (STAR35...) [RPE](#)  
Sheep Anti Rabbit IgG (STAR36...) [DyLight@488](#), [DyLight@680](#), [DyLight@800](#)

### Recommended Useful Reagents

- [ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)  
[100x ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
----------------------------------	---	------------------	---	---------------	---

From March 15, 2021, we will no longer supply printed datasheets with our products.  
Look out for updates on how to access your digital version at [bio-rad-antibodies.com](https://www.bio-rad-antibodies.com)

'M374984:201210'

Printed on 11 Feb 2021

