abcam

Product datasheet

Anti-Elastin antibody [BA-4] ab9519

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Overview

Product name	Anti-Elastin antibody [BA-4]
Description	Mouse monoclonal [BA-4] to Elastin
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P, IHC-Fr
Species reactivity	**Reacts with:** Human **Predicted to work with:** Sheep, Goat, Guinea pig, Cat, Dog, Pig
Immunogen	The details of the immunogen for this antibody are not available.
Epitope	BA-4 is specific for a chemotactically active epitope composed of valine, glycine, alanine, and proline in a molar ratio of approximately 2:2:1:1 (PMID 2429696).
Positive control	WB: Human skin tissue lysate. IHC-P: FFPE normal Human Duodenum tissue sections IHC-Fr: Human normal skin
General notes	This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact **orders@abcam.com**. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium azide Constituent: PBS
Purity	Protein G purified
Primary antibody notes	Elastin is an important polymeric protein of connective tissue that imparts elasticity to vertebrate

elastic tissues.

Clonality	Monoclonal
Clone number	BA-4
Myeloma	unknown
Isotype	IgG1
Light chain type	unknown

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab9519 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 0.51 µg/ml. Detects a band of approximately 70 kDa (predicted molecular weight: 68 kDa).
IHC-P	★★★★☆ (6)	Use a concentration of 1 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IHC-Fr	★★★★★ (2)	Use a concentration of 1 µg/ml.

Target

Function Major structural protein of tissues such as aorta and nuchal ligament, which must expand rapidly and recover completely. Molecular determinant of the late arterial morphogenesis, stabilizing arterial structure by regulating proliferation and organization of vascular smooth muscle.

Tissue specificity Expressed within the outer myometrial smooth muscle and throughout the arteriolar tree of uterus (at protein level). Also expressed in the large arteries, lung and skin.

Involvement in disease Defects in ELN are a cause of autosomal dominant cutis laxa (ADCL) [MIM:123700]. Cutis laxa is a rare connective tissue disorder characterized by loose, hyperextensible skin with decreased resilience and elasticity leading to a premature aged appearance. The skin changes are often accompanied by extracutaneous manifestations, including pulmonary emphysema, bladder diverticula, pulmonary artery stenosis and pyloric stenosis.
Defects in ELN are the cause of supravalvular aortic stenosis (SVAS) [MIM:185500]. SVAS is a congenital narrowing of the ascending aorta which can occur sporadically, as an autosomal dominant condition, or as one component of Williams-Beuren syndrome.
Note=ELN is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region. Haploinsufficiency of ELN may be the cause of certain cardiovascular and musculo-skeletal abnormalities observed in the disease.

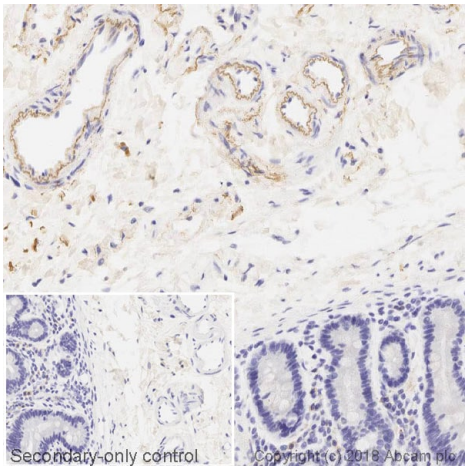
Sequence similarities Belongs to the elastin family.

Post-translational modifications Elastin is formed through the cross-linking of its soluble precursor tropoelastin. Cross-linking is initiated through the action of lysyl oxidase on exposed lysines to form allysine. Subsequent spontaneous condensation reactions with other allysine or unmodified lysine residues result in

various bi-, tri-, and tetrafunctional cross-links. The most abundant cross-links in mature elastin fibers are lysinonorleucine, allysine aldol, desmosine, and isodesmosine.
Hydroxylation on proline residues within the sequence motif, GXPG, is most likely 4-hydroxy as this fits the requirement for 4-hydroxylation in vertebrates.

Cellular localization Secreted > extracellular space > extracellular matrix. Extracellular matrix of elastic fibers.

Images

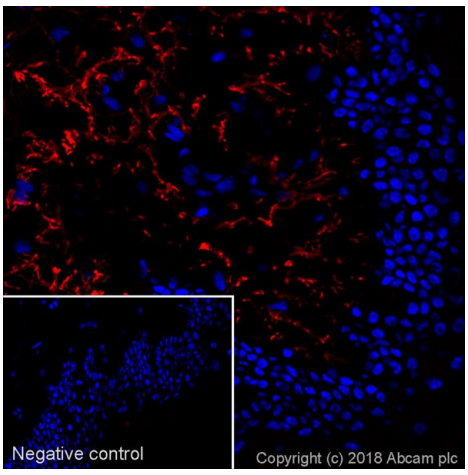


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Elastin antibody [BA-4] (ab9519)

IHC image of Elastin staining in a section of formalin-fixed paraffin-embedded normal human normal duodenum* performed on a Leica BOND™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab9519, 1ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

**Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre*



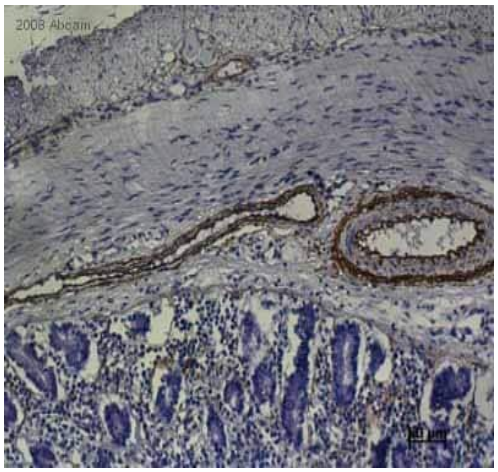
Immunohistochemistry (Frozen sections) - Anti-Elastin antibody [BA-4] (ab9519)

IHC image of ab9519 staining in 10% formaldehyde fixed frozen tissue section of normal human skin.

Non-specific protein-protein interactions were blocked using TBS containing 0.025% (v/v) Triton X-100, 0.3M (w/v) glycine and 3% (w/v) BSA for 1h at room temperature. The section was then incubated with ab9519 (1µg/ml) in TBS containing 0.025% (v/v) Triton X-100 and 3% (w/v) BSA overnight at +4°C. The section was then incubated with **ab150119** (Goat polyclonal Secondary Antibody to Mouse IgG - H&L (Alexa Fluor® 647)) and DAPI for 1 hour at room temperature.

The DAPI only control (no antibody) inset shows no autofluorescence, demonstrating that any Alexa Fluor® 647 signal is derived directly from bound ab9519.

For other IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Elastin antibody [BA-4] (ab9519)

This image is courtesy of an anonymous Abreview

ab9519 staining pig small intestine tissue sections by IHC-P. Sections were fixed with Bouins and subjected to an enzymatic antigen retreival step. The primary antibody was diluted 1/200 in a commercially available antibody diluent (replacing the blocking step) and incubated with the sample for 1 hour at 20°C. A HRP conjugated goat anti-mouse antibody was used as the secondary.

Western blot - Anti-Elastin antibody [BA-4] (ab9519)

Anti-Elastin antibody [BA-4] (ab9519) at 0.51 µg/ml + Human skin tissue lysate - total protein (**ab30166**) at 20 µg

Secondary

Goat Anti-Mouse IgG H&L (HRP) preadsorbed (**ab97040**) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 68 kDa
Observed band size: 70 kDa
Additional bands at: 55 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 20 minutes

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