abcam

Product datasheet

Anti-alpha Elastin antibody ab21607

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Overview

Product name	Anti-alpha Elastin antibody
Description	Rabbit polyclonal to alpha Elastin
Tested applications	**Suitable for:** ICC, ELISA, WB, IP, IHC-FoFr, IHC-P
Species reactivity	**Reacts with:** Mouse, Rabbit, Cow, Dog, Human **Does not react with:** Rat
Immunogen	Full length native protein (insoluble alpha elastin purified from human aorta by hot sodium hydroxide).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Add glycerol to a final volume of 50% for extra stability and aliquot. Store at -20°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: None Constituents: Whole serum
Purity	Whole antiserum
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab21607** 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
ICC		1/50 - 1/100.
ELISA		1/1000 - 1/2000.
WB	★★★★★	1/200 - 1/500. Predicted molecular weight: 70 kDa.

Application	Abreviews	Notes
IP		1/100 - 1/200.
IHC-FoFr		1/50 - 1/100. In many cases, antigenicity of elastic fiber components can be enhanced by treating with 6 M guanidine HCl, 50 mM dithiothreitol, 20 mM Tris pH 8.0 for 15 minutes. After washing with 20 mM Tris pH 8.0, the slides are treated with 100 mM iodoacetamide in the dark for 15 minutes, washed and stained using normal protocols.
IHC-P		1/50 - 1/100. In many cases, antigenicity of elastic fiber components can be enhanced by treating with 6 M guanidine HCl, 50 mM dithiothreitol, 20 mM Tris pH 8.0 for 15 minutes. After washing with 20 mM Tris pH 8.0, the slides are treated with 100 mM iodoacetamide in the dark for 15 minutes, washed and stained using normal protocols.

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 the cause of cutis laxa, autosomal dominant, type 1 (ADCL1) [MIM:123700]. A connective tissue disorder characterized by loose, hyperextensible skin with decreased resilience and elasticity leading to a premature aged appearance. Face, hands, feet, joints, and torso may be differentially affected. Additional variable clinical features are gastrointestinal diverticula, hernia, and genital prolapse. Rare manifestations are pulmonary artery stenosis, aortic aneurysm, bronchiectasis, and emphysema. 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.

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