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Anti-Elastin Antibody MSVA-648R / Recombinant Rabbit monoclonal

Human SwissProt	P15502
Human Gene	ELN
Symbol	
Synonyms	Elastin; ELN; SVAS; Tropoelastin; WBS; WS
Specificity	Elastin
Immunogen	Recombinant fragment of human ELN protein
lsotype	Rabbit / IgG
Species Reactivity	Human
Localization	Secreted and Extracellular Space

Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non- hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Colon: A moderate to strong elastin immunostaining should be seen of fibres in the lamina prop ria, around smooth muscle cells of the muscularis mucosae, and in blood vessels (subendothelial).
Negative Control	Colon: Elastin immunostaining should be absent in all epithelial cells.



Colon descendes - Elastin fibres predominate in the lamina propria, around smooth muscle cells of the muscularis mucosae, and in blood vessels. Testis - High density of elastin fibres along smooth muscles surrounding tubuli of the testis. Bronchus, mucosa - High content of elastin fibres along the bronchus mucosa.

Biology

Elastin protein consists of a wide range of elastic peptide and protein sequences that exist in different lengths and with different compositions. Elastin is a pivotal element of the extracellular matrix. As elastin is about 1000 times more flexible than collagens, this protein assures tissue elasticity and provides resilience to tissues and organs. Elastin is the dominant extracellular matrix protein in extensible tissues. Related to the tissues dry weight, it constitutes for 50% of blood vessels, 70% of elastic ligaments, 30% of lungs, and 2-4% of the skin. Tropoelastin, the precursor of elastin, is derived from fibroblasts, smooth muscle cells, chondrocytes, or endothelial cells before it is processed to elastin by cleavage of its signal peptide. Deletions and mutations in this gene are associated with supravalvular aortic stenosis (SVAS), the autosomal dominant cutis laxa, and the Williams-Beuren syndrome. Elastin immunostaining is - to a variable extent - seen in the vast majority of normal tissues. Most abundantly it occurs in the media of the aorta and in vessels of the elastic type. A subendothelial band is seen in muscular types arteries and in veins. Elastin fibres typically surround muscle cells of all types including the myometrium. Organs with particular high elastin levels include lung, epididymis, and the gallbladder. Organs with particularly low levels of elastin include fat, placenta, kidney (except vessels), parathyroid, and the brain. In the liver, elastin only occurs around central veins and in portal fields. In tumors, elastin immunostaining is preferentially seen in remnants of structures invaded by a cancer and around vessels. Less commonly, newly formed elastin can be observed in the tumor stroma (stroma elastosis).

Potential Research Applications

-Elastin is an abundant component of the extracellular matrix but never expressed in epithelial tissues. Elastin immunostaining may thus be used for tissue characterization in multicolor immunohistochemistry together with other markers.

-The role of stromal elastosis in cancer is unknown.

-The role of immunohistochemical assessment of elastin in heart disease, degenerative disorders and other diseases has not been extensively studied.

Protocol Suggestions

Dilution: 1:150 ; pH7,8 is optimal.

Freshly cut sections should be used (less than 10 days between cutting and staining).

Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

Not for resale without express authorization.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



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Aorta, media - Elastin is most abundant in the media of the aorta



Appendix, muscular wall - Smooth muscle cells are surrounded of by elastin fibres



Colon descendens, mucosa - Elastin fibres predominate in the lamina propria, around smooth muscle cells of the muscularis mucosae, and in blood vessels



Fallopian tube, mucosa



Colon descendens, muscular wall -Smooth muscle cells are surrounded of by elastin fibres



Gallbladder, epithelium - High elastin content in the lamina propria and around smooth muscle cells



Pituitary gland, posterior lobe



Uterus, ectocervix



Duodenum, mucosa - Elastin fibres occur in the lamina propria of the gastrointestinal mucosa. They also surround smooth muscle cells of the muscularis mucosae



lleum, mucosa - A subendothelial elastin band is seen in muscular types arteries and in veins



Skeletal muscle - Skeletal muscle cells are surrounded of by elastin fibres



Ovary, stroma - High content of elastin fibres



Pancreas



Stomach, antrum - Elastin fibres occur in the lamina propria of the gastrointestinal mucosa



Urinary bladder, muscular wall -Smooth muscle cells are surrounded of by elastin fibres





