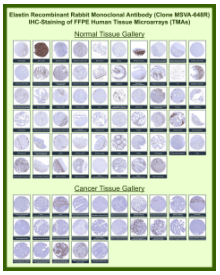
ELN Antibody / Elastin [clone MSVA-648R] (V5870)

Catalog No.	Formulation	Size
V5870-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5870-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-648R
UniProt	P15502
Localization	Extracellular matrix, Extracellular space, Secreted
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This ELN/Elastin antibody is available for research use only.



Immunohistochemistry tissue microarray analysis of Elastin expression. Recombinant ELN/Elastin antibody (clone MSVA-648R) was evaluated by immunohistochemistry on formalin-fixed, paraffin-embedded human tissue microarrays representing a broad panel of normal and cancer tissues. Staining highlights extracellular matrix-associated and elastic fiber localization in tissues known to contain elastic structures, including vascular, pulmonary, and connective tissue compartments, with minimal staining in tissues lacking elastic fibers. Cancer tissues show variable stromal and vascular-associated immunoreactivity depending on tumor type. Overall staining distribution and relative expression patterns are consistent with publicly available expression data reported by the Human Protein Atlas, supporting the biological relevance of the observed immunostaining.

Description

ELN antibody targets Elastin, a highly resilient extracellular matrix protein encoded by the ELN gene and a principal component of elastic fibers in connective tissues. Elastin provides elasticity and recoil to tissues that undergo repeated stretching, including blood vessels, lungs, skin, and ligaments. As a core structural protein of the extracellular matrix, Elastin is essential for maintaining tissue flexibility and mechanical integrity throughout development and adult life.

Elastin is synthesized as the soluble precursor tropoelastin, which is secreted into the extracellular space and subsequently cross-linked to form insoluble elastic fibers. These fibers are organized in association with microfibrillar proteins such as fibrillins, creating an elastic network that supports tissue architecture. ELN antibody detection is therefore valuable for studying extracellular matrix organization, connective tissue biology, and vascular structure.

Functionally, Elastin enables tissues to withstand mechanical stress and return to their original shape after deformation. In the vasculature, Elastin contributes to arterial compliance and blood pressure regulation, while in the lung it supports normal respiratory mechanics. Alterations in elastin fiber structure or abundance can significantly impact tissue function, making recombinant ELN antibody reagents useful for investigations into biomechanics and extracellular matrix remodeling.

Abnormal Elastin expression or organization is associated with several developmental and pathological conditions. Mutations in the ELN gene are linked to connective tissue disorders such as supravalvular aortic stenosis and Williams syndrome, while elastin degradation is a hallmark of aging, chronic inflammation, and diseases including emphysema and vascular aneurysms. Changes in Elastin distribution are also observed in fibrosis and tumor-associated stromal remodeling. These associations highlight the relevance of ELN antibody-based detection in studies of cardiovascular disease, pulmonary pathology, and tissue remodeling.

Clone MSVA-648R is designed to recognize Elastin in research applications. Recombinant ELN antibody reagents are suitable for detecting extracellular matrix localization and elastic fiber distribution in normal and diseased tissues, supporting research into connective tissue development, vascular biology, and disease-associated extracellular matrix alterations.

Application Notes

1. Optimal dilution of the ELN/Elastin antibody should be determined by the researcher.

2. This ELN/Elastin antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant full-length human Elastin protein was used as the immunogen for the ELN/Elastin antibody.

Storage

ELN/Elastin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.