

## elastin (E-11): sc-166543



The Power to Question

**BACKGROUND**

Elastic fibers, which are comprised primarily of elastin, endow loose connective tissue with a resilience that complements the tensile strength of collagenous fibers. Elastin is the main component of the extracellular matrix of arteries and it performs a regulatory function during arterial development by controlling proliferation of smooth muscle and stabilizing arterial structure. Elastin is composed largely of glycine, proline and other hydrophobic residues and contains multiple lysine-derived crosslinks, such as desmosines, which link individual polypeptide chains into a rubber-like network. During aging, the elasticity of connective tissue becomes reduced, due to the cross-linking of collagenous fibers with elastin. Deficiencies of elastin are associated with multiple disorders, such as supravalvular aortic stenosis and Williams-Beuren syndrome. The human elastin gene maps to chromosome 7q11.23.

**CHROMOSOMAL LOCATION**

Genetic locus: ELN (human) mapping to 7q11.23; Eln (mouse) mapping to 5 G2.

**SOURCE**

elastin (E-11) is a mouse monoclonal antibody raised against amino acids 431-730 of elastin of human origin.

**PRODUCT**

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

elastin (E-11) is available conjugated to agarose (sc-166543 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166543 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166543 PE), fluorescein (sc-166543 FITC), Alexa Fluor® 488 (sc-166543 AF488), Alexa Fluor® 546 (sc-166543 AF546), Alexa Fluor® 594 (sc-166543 AF594) or Alexa Fluor® 647 (sc-166543 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166543 AF680) or Alexa Fluor® 790 (sc-166543 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

elastin (E-11) is recommended for detection of elastin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

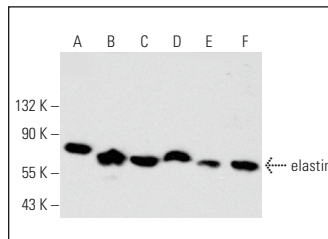
Suitable for use as control antibody for elastin siRNA (h): sc-43360, elastin siRNA (m): sc-43361, elastin shRNA Plasmid (h): sc-43360-SH, elastin shRNA Plasmid (m): sc-43361-SH, elastin shRNA (h) Lentiviral Particles: sc-43360-V and elastin shRNA (m) Lentiviral Particles: sc-43361-V.

Molecular Weight of elastin: 70 kDa.

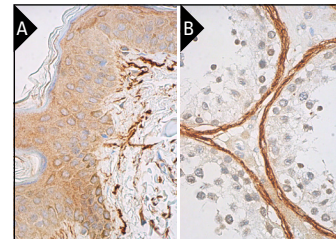
Positive Controls: H69AR whole cell lysate: sc-364382, MES-SA/Dx5 cell lysate: sc-2284 or MIA PaCa-2 cell lysate: sc-2285.

**STORAGE**

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**DATA**

elastin (E-11): sc-166543. Western blot analysis of elastin expression in c4 (A), MES-SA/Dx5 (B), MIA PaCa-2 (C), MCF7 (D), BJ (E) and H69AR (F) whole cell lysates.



elastin (E-11): sc-166543. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells, melanocytes and extracellular fibers staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of myoid cells (B).

**SELECT PRODUCT CITATIONS**

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- Kim, Y.M., et al. 2016. Anti-wrinkle effects of a tuna heart H<sub>2</sub>O fraction on Hs27 human fibroblasts. *Int. J. Mol. Med.* 37: 92-98.
- Kim, C.R., et al. 2017. *Pyropia yezoensis* peptide promotes collagen synthesis by activating the TGF-β/Smad signaling pathway in the human dermal fibroblast cell line Hs27. *Int. J. Mol. Med.* 39: 31-38.
- Soler, A., et al. 2018. Elevated 20-HETE in metabolic syndrome regulates arterial stiffness and systolic hypertension via MMP12 activation. *J. Mol. Cell. Cardiol.* 117: 88-99.
- Santarella, F., et al. 2020. Scaffolds functionalized with matrix from induced pluripotent stem cell fibroblasts for diabetic wound healing. *Adv. Healthc. Mater.* 9: e2000307.
- Chen, P., et al. 2021. COL5A1 variants cause aortic dissection by activating TGF-β-signaling pathway. *J. Am. Heart Assoc.* 10: e019276.
- Kader, A., et al. 2021. Visualization and quantification of the extracellular matrix in prostate cancer using an elastin specific molecular probe. *Biology* 10: 1217.
- Saddic, L., et al. 2022. Proteomic analysis of descending thoracic aorta identifies unique and universal signatures of aneurysm and dissection. *JVS Vasc. Sci.* 3: 85-181.
- Connolly, L.M., et al. 2023. Caspase 1 enhances transport and Golgi organization protein 1 expression to promote procollagen export from the endoplasmic reticulum in systemic sclerosis contributing to fibrosis. *Arthritis Rheumatol.* 75: 1831-1841.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.