## SANTA CRUZ BIOTECHNOLOGY, INC.

# elastin (BA-4): sc-58756



## BACKGROUND

Elastic fibers, which are comprised primarily of elastin, endow loose connective tissue with a resilience that complements the tensile stength 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 (BA-4) is a mouse monoclonal antibody raised against elastin of bovine origin.

#### PRODUCT

Each vial contains 200  $\mu g\, lgG_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

elastin (BA-4) is available conjugated to agarose (sc-58756 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-58756 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58756 PE), fluorescein (sc-58756 FITC), Alexa Fluor\* 488 (sc-58756 AF488), Alexa Fluor\* 546 (sc-58756 AF546), Alexa Fluor\* 594 (sc-58756 AF594) or Alexa Fluor\* 647 (sc-58756 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor\* 680 (sc-58756 AF680) or Alexa Fluor\* 790 (sc-58756 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## **APPLICATIONS**

elastin (BA-4) is recommended for detection of insoluble elastin,  $\alpha$ -elastin and soluble non-cross linked precursor of elastin (tropoelastin) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500). elastin (BA-4) is also reommended for detection of insoluble elastin,  $\alpha$ -elastin and soluble noncross linked precursor of elastin (tropoelastin) in additional species, including bovine, porcine, feline and canine.

Suitable for use as control antibody for elastin siRNA (h): sc-43360, elastin siRNA (m): sc-43361, elastin siRNA (r): sc-270235, elastin shRNA Plasmid (h): sc-43360-SH, elastin shRNA Plasmid (m): sc-43361-SH, elastin shRNA Plasmid (r): sc-270235-SH, elastin shRNA (h) Lentiviral Particles: sc-43360-V, elastin shRNA (m) Lentiviral Particles: sc-43361-V and elastin shRNA (r) Lentiviral Particles: sc-270235-V.

#### STORAGE

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

#### DATA





elastin (BA-4): sc-58756. Western blot analysis of elastin expression in mouse liver tissue extract. elastin (BA-4): sc-58756. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing extracellular fibers and membrane staining of cells in seminiferous ducts.

#### **SELECT PRODUCT CITATIONS**

- Munoz-Pinto, D.J., et al. 2009. Uncoupled investigation of scaffold modulus and mesh size on smooth muscle cell behavior. J. Biomed. Mater. Res. A 90: 303-316.
- 2. Patel, D., et al. 2011. Self-assembly of elastin-based peptides into the ECM: the importance of integrins and the elastin binding protein in elastic fiber assembly. Biomacromolecules 12: 432-440.
- Sugita, S. and Matsumoto, T. 2013. Quantitative measurement of the distribution and alignment of collagen fibers in unfixed aortic tissues. J. Biomech. 46: 1403-1407.
- 4. Andrews, S.H., et al. 2014. Tie-fibre structure and organization in the knee menisci. J. Anat. 224: 531-537.
- Tang, J., et al. 2017. Mechanism of mechanical trauma-induced extracellular matrix remodeling of fibroblasts in association with Nrf2/ARE signaling suppression mediating TGF-β1/Smad3 signaling inhibition. Oxid. Med. Cell. Longev. 2017: 8524353.
- Karamariti, E., et al. 2018. DKK3 (Dickkopf 3) alters atherosclerotic plaque phenotype involving vascular progenitor and fibroblast differentiation into smooth muscle cells. Arterioscler. Thromb. Vasc. Biol. 38: 425-437.
- 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.
- Nanashima, N., et al. 2018. Blackcurrant anthocyanins increase the levels of collagen, elastin, and hyaluronic acid in human skin fibroblasts and ovariectomized rats. Nutrients 10: 495.

#### **RESEARCH USE**

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

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Molecular Weight of elastin: 70 kDa.