

elastin (A-8): sc-374638

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.

REFERENCES

- Henin-Pizieux, O., et al. 1979. Isolation and characterization of desmosine(s) containing peptide fractions of normal and diseased human aortic elastin. *Paroi Arterielle* 5: 41-53.
- Cambell, N. 1990. *Biology*. Redwood City, CA: The Benjamin/Cummings Publishing Company, Inc., 784-785.
- Fazio, M.J., et al. 1991. Human elastin gene: new evidence for localization to the long arm of chromosome. *Am. J. Hum. Genet.* 48: 696-703.

CHROMOSOMAL LOCATION

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

SOURCE

elastin (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-407 within an internal region of elastin of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

elastin (A-8) is available conjugated to agarose (sc-374638 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374638 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374638 PE), fluorescein (sc-374638 FITC), Alexa Fluor® 488 (sc-374638 AF488), Alexa Fluor® 546 (sc-374638 AF546), Alexa Fluor® 594 (sc-374638 AF594) or Alexa Fluor® 647 (sc-374638 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374638 AF680) or Alexa Fluor® 790 (sc-374638 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374638 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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RESEARCH USE

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

APPLICATIONS

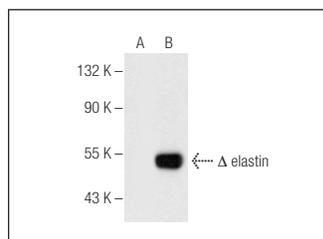
elastin (A-8) is recommended for detection of precursor tropoelastin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 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.

Molecular Weight of elastin: 70 kDa.

Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, elastin (h): 293T Lysate: sc-117067 or mouse liver extract: sc-2256.

DATA



elastin (A-8): sc-374638. Western blot analysis of elastin expression in non-transfected: sc-117752 (A) and truncated human elastin transfected: sc-117067 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ekman, M., et al. 2013. Mir-29 repression in bladder outlet obstruction contributes to matrix remodeling and altered stiffness. *PLoS ONE* 8: e82308.
- Chen, W.C., et al. 2016. Decellularized zebrafish cardiac extracellular matrix induces mammalian heart regeneration. *Sci. Adv.* 2: e1600844.
- Olsen, T.R., et al. 2016. Longitudinal stretching for maturation of vascular tissues using magnetic forces. *Bioengineering* 3: 29.
- Hong, Y., et al. 2021. Beneficial effects of *Diplectria barbata* (Wall. Ex C. B. Clarke) Franken et Roos extract on aging and antioxidants *in vitro* and *in vivo*. *Toxicol. Res.* 37: 71-83.
- Rahaman, M.S., et al. 2024. ECM derivatized alginate augmenting bio-functionalities of lyophilized mat for skin and liver wound treatment. *Biomaterials* 311: 122698.

STORAGE

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