

elastin (F-5): sc-166369

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 Artérielle* 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 7. *Am. J. Hum. Genet.* 48: 696-703.
- Ewart, A.K., et al. 1993. Hemizygoty at the elastin locus in a developmental disorder, Williams syndrome. *Nat. Genet.* 5: 11-16.

CHROMOSOMAL LOCATION

Genetic locus: ELN (human) mapping to 7q11.23.

SOURCE

elastin (F-5) is a mouse monoclonal antibody raised against amino acids 431-730 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.

APPLICATIONS

elastin (F-5) is recommended for detection of elastin of 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 shRNA Plasmid (h): sc-43360-SH and elastin shRNA (h) Lentiviral Particles: sc-43360-V.

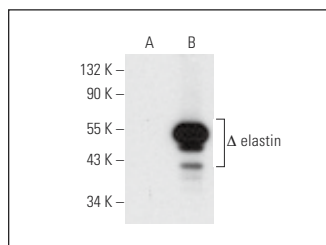
Molecular Weight of elastin: 70 kDa.

Positive Controls: elastin (h): 293T Lysate: sc-117067, MES-SA/Dx5 cell lysate: sc-2284 or A549 cell lysate: sc-2413.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



elastin (F-5): sc-166369. 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

- Samouillan, V., et al. 2012. Lipid loading of human vascular smooth muscle cells induces changes in tropoelastin protein levels and physical structure. *Biophys. J.* 103: 532-540.
- Caballero, M., et al. 2013. Effects of connective tissue growth factor on the regulation of elastogenesis in human umbilical cord-derived mesenchymal stem cells. *Ann. Plast. Surg.* 70: 568-573.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **elastin (BA-4): sc-58756** for elastin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.