

Elastase-3 (V-14): sc-167740

BACKGROUND

Elastases belong to a subfamily of serine proteases that function to catalytically hydrolyze a wide variety of proteins. Elastase-3, also known as Ela3, Ela3b or Cela3b (chymotrypsin-like elastase family, member 3B), is a 255 amino acid murine protein that belongs to the peptidase S1 family and is the homolog of human Elastase-3B. There are six human Elastase genes that encode structurally similar proteins, Elastase-1, 2, 2A, 2B, 3A, and 3B. Unlike the other Elastase proteins, Elastase-3B has little elastolytic activity. Secreted as a zymogen from the pancreas, Elastase-3B possesses similar functions as Elastase-3A, in which it acts as a digestive enzyme in the intestine and participates in metabolic degradation pathways by preferentially cleaving proteins that have alanine residues. In addition, Elastase-3B is thought to play a role in the metabolism and transport of cholesterol molecules in the intestine.

REFERENCES

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- Shimada, S., et al. 2002. Pancreatic elastase IIIA and its variants are expressed in pancreatic carcinoma cells. *Int. J. Mol. Med.* 10: 599-603.
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CHROMOSOMAL LOCATION

Genetic locus: Cela3b (mouse) mapping to 4 D3.

SOURCE

Elastase-3 (V-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Elastase-3 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167740 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

Elastase-3 (V-14) is recommended for detection of Elastase-3 of mouse origin and Elastase-3B of rat origin of mouse and rat 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other Elastase family members.

Suitable for use as control antibody for Elastase-3 siRNA (m): sc-144629, Elastase-3 shRNA Plasmid (m): sc-144629-SH and Elastase-3 shRNA (m) Lentiviral Particles: sc-144629-V.

Molecular Weight of Elastase-3: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

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