

Elastase-1 (4H5): sc-517432

BACKGROUND

Elastase-1 is a serine protease that belongs to the elastase subfamily of the peptidase S1 family. It is secreted by the exocrine pancreas in all mammals but is transcriptionally silent in human pancreas due to mutations that inactivate its promoter and enhancer. Elastase-1 plays a role in the digestion of elastin, fibrin, hemoglobin and albumin and its activity can be inhibited by elafin. In humans, Elastase-1 is expressed only in skin keratinocytes and localizes to the basal cell layer of the epidermis where it may play a role in the detachment of cells from the basement membrane. Elastase-1 expressed in keratinocytes may be inhibited by SLPI (secretory leukocyte protease inhibitor) instead of elafin. In addition, Elastase-1 may be a candidate for diffuse nonepidermolytic palmoplantar keratoderma (NEPPK), an autosomal dominant skin disease.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CELA1 (human) mapping to 12q13.13.

SOURCE

Elastase-1 (4H5) is a mouse monoclonal antibody raised against a recombinant protein corresponding to full-length Elastase-1 of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Elastase-1 (4H5) is recommended for detection of Elastase-1 of 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), 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 Elastase-1 siRNA (h): sc-105326, Elastase-1 shRNA Plasmid (h): sc-105326-SH and Elastase-1 shRNA (h) Lentiviral Particles: sc-105326-V.

Molecular Weight of Elastase-1: 28 kDa.

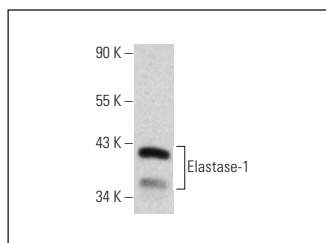
Positive Controls: human keratinocyte tissue extract.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 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, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



Elastase-1 (4H5): sc-517432. Western blot analysis of Elastase-1 expression in human keratinocyte tissue extract.

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 for detailed protocols and support products.