SANTA CRUZ BIOTECHNOLOGY, INC.

SerpinB6 (E-8): sc-398487

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The Power to Question

BACKGROUND

Members of the serine protease inhibitor superfamily are collectively called serpins. Inhibitory serpins typically form 1:1 complexes with their target proteases, which are often SDS-stable associations. SerpinB6, also known as protease inhibitor 6 (PI-6) in human and Spi3 in mouse, is a serine protease inhibitor with both antitrypsin and antichymotrypsin activity. Although most serpins are secreted glycoproteins that regulate extracellular proteases, SerpinB6 lacks classical nuclear localization, exhibiting primarily cytoplasmic distribution, and is not secreted by conventional methods. SerpinB6 is present in most tissues in capillary endothelial cells, platelets, epithelial cells, monocytes and granulocytes. SerpinB6 binds the arginine-selective protease human kallikrein 2 (hK2) as well as the monocyte and granulocyte azurophilic granule protease cathepsin G. In mouse, there are three SerpinB6 genes, namely SerpinB6a, SerpinB6b and SerpinB6c.

REFERENCES

1. Sun, J., et al. 1995. Gene structure, chromosomal localization, and expression of the murine homologue of human proteinase inhibitor 6 (PI-6) suggests divergence of PI-6 from the ovalbumin serpins. J. Biol. Chem. 270: 16089-16096.
2. Sprecher, C.A., et al. 1995. Molecular cloning, expression, and partial characterization of two novel members of the ovalbumin family of serine proteinase inhibitors. J. Biol. Chem. 270: 29854-29861.
3. Nakaya, N., et al. 1998. The expression and localization of serine proteinase inhibitor PI-6 mRNA in developmental and ischemic mouse brain. Neurosci. Res. 32: 221-230.
4. Scott, F.L., et al. 1998. Proteinase inhibitor 6 (PI-6) expression in human skin: induction of PI-6 and a PI-6/proteinase complex during keratinocyte differentiation. Exp. Cell Res. 245: 263-271.
5. SWISS-PROT/TrEMBL (P35237). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

CHROMOSOMAL LOCATION

Genetic locus: SERPINB6 (human) mapping to 6p25.2.

SOURCE

SerpinB6 (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 178-193 within an internal region of SerpinB6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-398487 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

SerpinB6 (E-8) is recommended for detection of SerpinB6 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 SerpinB6 siRNA (h): sc-63304, SerpinB6 shRNA Plasmid (h): sc-63304-SH and SerpinB6 shRNA (h) Lentiviral Particles: sc-63304-V.

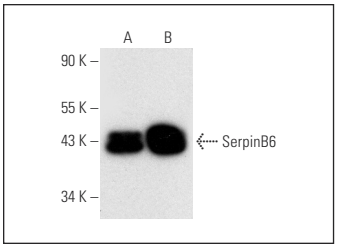
Molecular Weight of SerpinB6: 42 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206 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 L-Agarose: sc-2336 (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



SerpinB6 (E-8): sc-398487. Western blot analysis of SerpinB6 expression in A549 (**A**) and MCF7 (**B**) whole cell lysates.

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.