

SerpinB6 (G-5): sc-398463

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 (PI-6) suggests a divergence of PI-6 from the ovalbumin serpins. *J. Biol. Chem.* 270: 16089-16096.
2. Scott, F., et al. 1996. Proteinase inhibitor 6 cannot be secreted, which suggests it is a new type of cellular serpin. *J. Biol. Chem.* 271: 1605-1612.
3. Scott, F., et al. 1999. The intracellular serpin proteinase inhibitor 6 is expressed in monocytes and granulocytes and is a potent inhibitor of the azurophilic granule protease, cathepsin G. *Blood* 93: 2089-2097.
4. Mikolajczyk, S., et al. 1999. Identification of a novel complex between human kallikrein 2 and protease inhibitor-6 in prostate cancer tissue. *Cancer Res.* 59: 3927-3930.
5. Saedi, M., et al. 2001. Human kallikrein 2 (hK2), but not prostate-specific antigen (PSA), rapidly complexes with protease inhibitor 6 (PI-6) released from prostate carcinoma cells. *Int. J. Cancer* 94: 558-563.
6. Bird, C., et al. 2001. Nucleocytoplasmic distribution of the ovalbumin serpin PI-9 requires a nonconventional nuclear import pathway and the export factor Crm1. *Mol. Cell. Biol.* 21: 5396-5407.

CHROMOSOMAL LOCATION

Genetic locus: SERPINB6 (human) mapping to 6p25.2; Serpinb6a (mouse) mapping to 13 A3.3.

SOURCE

SerpinB6 (G-5) is a mouse monoclonal antibody raised against amino acids 203-250 mapping within an internal region of SerpinB6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

SerpinB6 (G-5) is recommended for detection of SerpinB6 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 SerpinB6 siRNA (h): sc-63304, SerpinB6 siRNA (m): sc-40953, SerpinB6 shRNA Plasmid (h): sc-63304-SH, SerpinB6 shRNA Plasmid (m): sc-40953-SH, SerpinB6 shRNA (h) Lentiviral Particles: sc-63304-V and SerpinB6 shRNA (m) Lentiviral Particles: sc-40953-V.

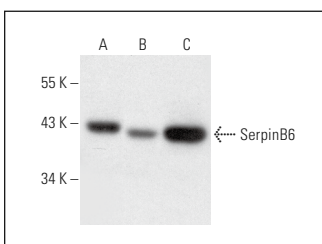
Molecular Weight of SerpinB6: 42 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, MCF7 whole cell lysate: sc-2206 or HeLa whole cell lysate: sc-2200.

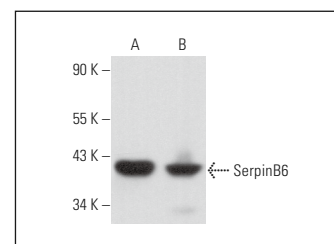
RECOMMENDED SUPPORT REAGENTS

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



SerpinB6 (G-5): sc-398463. Western blot analysis of SerpinB6 expression in Caki-1 (A), MCF7 (B) and HeLa (C) whole cell lysates.



SerpinB6 (G-5): sc-398463. Western blot analysis of SerpinB6 expression in A549 (A) and NIH/3T3 (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.