

SerpinB6 (F-12): sc-21143

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.

CHROMOSOMAL LOCATION

Genetic locus: SERPINB6 (human) mapping to 6p25.2; Serpinb6a/ Serpinb6c (mouse) mapping to 13 A3.3.

SOURCE

SerpinB6 (F-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SerpinB6 of human 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-21143 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

SerpinB6 (F-12) is recommended for detection of SerpinB6 of human and rat origin, and SerpinB6a and SerpinB6c of mouse 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).

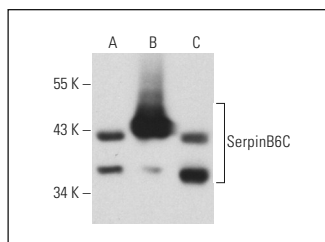
SerpinB6 (F-12) is also recommended for detection of SerpinB6 in additional species, including equine and canine.

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.

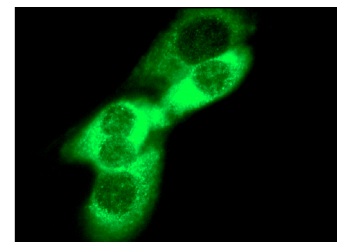
Molecular Weight of SerpinB6: 42 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, Caki-1 cell lysate: sc-2224 or SerpinB6 (m): 293T Lysate: sc-123498.

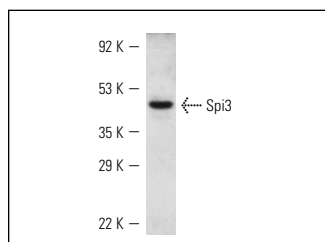
DATA



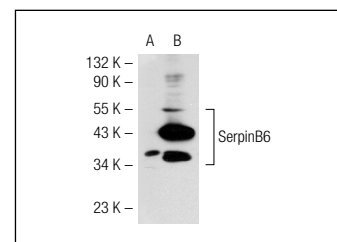
SerpinB6 (F-12): sc-21143. Western blot analysis of SerpinB6C expression in non-transfected 293T: sc-117752 (A), mouse SerpinB6C transfected 293T: sc-123498 (B) and Caki-1 (C) whole cell lysates.



SerpinB6 (F-12): sc-21143. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.



Spi3 (F-12): sc-21143. Western blot analysis of Spi3 expression in NIH/3T3 whole cell lysate.



SerpinB6 (F-12): sc-21143. Western blot analysis of SerpinB6 expression in non-transfected: sc-117752 (A) and mouse SerpinB6 transfected: sc-123498 (B) 293T whole cell lysates.

RESEARCH USE

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

MONOS
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Try **SerpinB6 (E-8): sc-398487** or **SerpinB6 (F-5): sc-374535**, our highly recommended monoclonal alternatives to SerpinB6 (F-12).