

SerpinsB6 (F-5): sc-374535

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.

CHROMOSOMAL LOCATION

Genetic locus: Serpinb6a (mouse) mapping to 13 A3.3.

SOURCE

SerpinsB6 (F-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 273-303 within an internal region of SerpinB6a of mouse origin.

PRODUCT

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

SerpinsB6 (F-5) is available conjugated to agarose (sc-374535 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374535 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374535 PE), fluorescein (sc-374535 FITC), Alexa Fluor® 488 (sc-374535 AF488), Alexa Fluor® 546 (sc-374535 AF546), Alexa Fluor® 594 (sc-374535 AF594) or Alexa Fluor® 647 (sc-374535 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374535 AF680) or Alexa Fluor® 790 (sc-374535 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374535 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

SerpinsB6 (F-5) is recommended for detection of SerpinB6 of mouse and rat 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), 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 SerpinB6 siRNA (m): sc-40953, SerpinB6 shRNA Plasmid (m): sc-40953-SH and SerpinB6 shRNA (m) Lentiviral Particles: sc-40953-V.

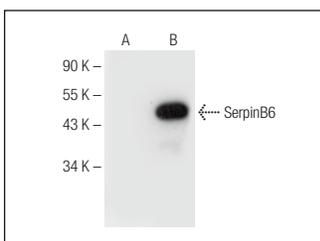
Molecular Weight of SerpinB6: 42 kDa.

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

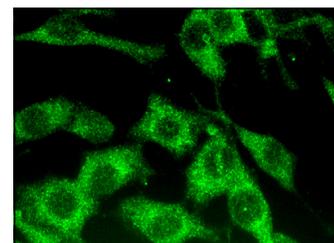
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SerpinsB6 (F-5): sc-374535. Western blot analysis of SerpinB6 expression in non-transfected: sc-117752 (A) and mouse SerpinB6 transfected: sc-123498 (B) 293T whole cell lysates.



SerpinsB6 (F-5): sc-374535. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

STORAGE

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

RESEARCH USE

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