

# SerpinB6 (H-48): sc-292536

## 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., Rose, J. and Bird, P. 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., Coughlin, P., Bird, C., Cerruti, L., Hayman, J. and Bird, P. 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., Hirst, C., Sun, J., Bird, C., Bottomley, S. and Bird, P. 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., Millar, L., Marker, K., Rittenhouse, H., Wolfert, R., Marks, L., Charlesworth, M. and Tindall, D. 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., Zhu, Z., Marker, K., Liu, R., Carpenter, P., Rittenhouse, H. and Mikolajczyk, S. 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., Blink, E., Hirst, C., Buzza, M., Steele, P., Sun, J., Jans, D. and Bird, P. 2001. Nucleocytoplasmic distribution of the ovalbumin serpin PI-9 requires a nonconventional nuclear import pathway and the export factor Crm1. *Mol. Cell. Biol.* 16: 5396-5407.

## CHROMOSOMAL LOCATION

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

## SOURCE

SerpinB6 (H-48) is a rabbit polyclonal antibody raised against amino acids 203-250 mapping within an internal region of SerpinB6 of human origin.

## RESEARCH USE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

SerpinB6 (H-48) is recommended for detection of SerpinB6 of human and, to a lesser extent, mouse and rat 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 (H-48) is also recommended for detection of SerpinB6 in additional species, including equine.

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.

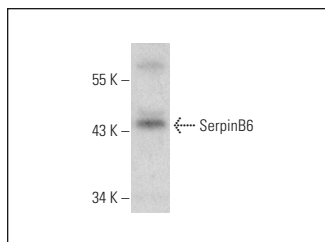
Molecular Weight of SerpinB6: 42 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224 or A549 cell lysate: sc-2413.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



SerpinB6 (H-48): sc-292536. Western blot analysis of SerpinB6 expression in NIH/3T3 whole cell lysate.

## STORAGE

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