

bomapin (B-3): sc-514795

BACKGROUND

Serpins, which are high molecular weight serine proteinase inhibitors, regulate a diverse set of intracellular and extracellular processes such as complement activation, fibrinolysis, coagulation, cellular differentiation, tumor suppression, apoptosis and cell migration. Serpins are also involved in the regulation of proteolytic processes in a variety of biological systems. The ov-serpins are a subset of the serpin superfamily, of which the cytoplasmic protein bomapin (PI10) is a member. The bomapin gene maps to the serpin cluster at human chromosome 18q21.33 and encodes a 397 amino acid serine protease inhibitor 10 that is highly expressed in human bone marrow cells. Bomapin is expressed in monocytic THP-1 and AML-193 cell lines. However, after treatment with phorbol myristate acetate, which induces monocytic differentiation, bomapin expression is reduced in THP-1 and AML-193 cells. In conclusion, bomapin may play a role in the regulation of protease activities, specifically in early stages of cellular differentiation and during hematopoiesis.

REFERENCES

1. Riewald, M. and Schleef, R.R. 1995. Molecular cloning of bomapin (protease inhibitor 10), a novel human serpin that is expressed specifically in the bone marrow. *J. Biol. Chem.* 270: 26754-26757.
2. Korpula-Mastalerz, R. and Dubin, A. 1996. The intracellular serpin family. *Acta Biochim. Pol.* 43: 419-429.
3. Bartuski, A.J., et al. 1997. Cytoplasmic antiproteinase 2 (PI8) and bomapin (PI10) map to the serpin cluster at 18q21.3. *Genomics* 43: 321-328.
4. Silverman, G.A., et al. 1998. SCCA1 and SCCA2 are proteinase inhibitors that map to the serpin cluster at 18q21.4. *Tumour Biol.* 19: 480-487.
5. Riewald, M., et al. 1998. Expression of bomapin, a novel human serpin, in normal/malignant hematopoiesis and in the monocytic cell lines THP-1 and AML-193. *Blood* 91: 1256-1262.

CHROMOSOMAL LOCATION

Genetic locus: SERPINB10 (human) mapping to 18q21.33.

SOURCE

bomapin (B-3) is a mouse monoclonal antibody raised against amino acids 247-293 mapping within an internal region of bomapin of human 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.

bomapin (B-3) is available conjugated to agarose (sc-514795 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514795 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514795 PE), fluorescein (sc-514795 FITC), Alexa Fluor® 488 (sc-514795 AF488), Alexa Fluor® 546 (sc-514795 AF546), Alexa Fluor® 594 (sc-514795 AF594) or Alexa Fluor® 647 (sc-514795 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514795 AF680) or Alexa Fluor® 790 (sc-514795 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

bomapin (B-3) is recommended for detection of bomapin 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 bomapin siRNA (h): sc-106812, bomapin shRNA Plasmid (h): sc-106812-SH and bomapin shRNA (h) Lentiviral Particles: sc-106812-V.

Molecular Weight of bomapin: 42 kDa.

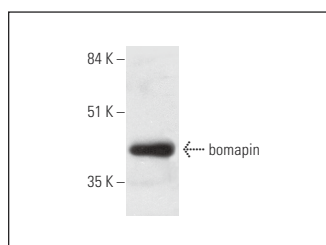
Positive Controls: HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

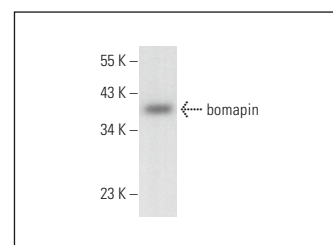
To ensure optimal results, the following support reagents are recommended:

- 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



bomapin (B-3): sc-514795. Western blot analysis of bomapin expression in HL-60 whole cell lysate.



bomapin (B-3): sc-514795. Western blot analysis of bomapin expression in K-562 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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.