

BSPII (H-157): sc-292393

BACKGROUND

BSPII (bone sialoprotein II), also known as IBSP (integrin-binding sialoprotein), BSP (bone sialoprotein), BNSP or SP-II, is a secreted acidic glycosylated, sulfated and phosphorylated protein that is synthesized by osteoblasts, osteocytes, osteoclasts, hypertrophic chondrocytes and other skeletal-associated cell types. BSPII is a major structural protein in bone matrix and makes up approximately 12% of the noncollagenous proteins in human bone. Non-collagenous proteins are believed to function in the regulation of bone mineralization. BSPII is capable of nucleating hydroxyapatite crystal formation and, therefore, is thought to play an important role in initial mineralization of bone, cementum and dentin. Belonging to the SIBLING family of proteins, BSPII contains an RGD sequence which recognizes the vitronectin receptor Integrin αV and may participate in mediating cell attachment. In addition, BSPII is expressed in various cancers, including lung, thyroid, breast and prostate cancers.

REFERENCES

1. Braten, M., et al. 1990. Effects of medullary reaming on fracture healing. Tibial osteotomies in rabbits. *Acta Orthop. Scand.* 61: 327-329.
2. Goold, R.D., et al. 1993. The development of sequence-tagged sites for human chromosome 4. *Hum. Mol. Genet.* 2: 1271-1288.
3. Kim, R.H., et al. 1994. Characterization of the human bone sialoprotein (BSP) gene and its promoter sequence. *Matrix Biol.* 14: 31-40.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 147563. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Inanc, B., et al. 2007. Effect of osteogenic induction on the *in vitro* differentiation of human embryonic stem cells cocultured with periodontal ligament fibroblasts. *Artif. Organs* 31: 792-800.
6. Knabe, C., et al. 2008. Effect of β -tricalcium phosphate particles with varying porosity on osteogenesis after sinus floor augmentation in humans. *Biomaterials* 29: 2249-2258.
7. Shimonishi, M., et al. 2008. Mutual induction of noncollagenous bone proteins at the interface between epithelial cells and fibroblasts from human periodontal ligament. *J. Periodont. Res.* 43: 64-75.
8. Ogata, Y. 2008. Bone sialoprotein and its transcriptional regulatory mechanism. *J. Periodont. Res.* 43: 127-135.

CHROMOSOMAL LOCATION

Genetic locus: IBSP (human) mapping to 4q22.1.

SOURCE

BSPII (H-157) is a rabbit polyclonal antibody raised against amino acids 161-317 mapping at the C-terminus of BSPII of human origin.

PRODUCT

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

APPLICATIONS

BSPII (H-157) is recommended for detection of BSPII of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 BSPII siRNA (h): sc-105128, BSPII shRNA Plasmid (h): sc-105128-SH and BSPII shRNA (h) Lentiviral Particles: sc-105128-V.

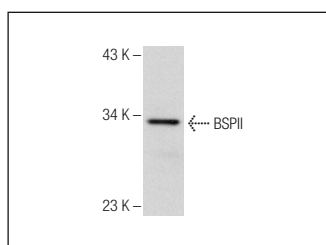
Molecular Weight of BSPII: 35 kDa.

Positive Controls: CCD-1064Sk cell lysate: sc-2263.

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



BSPII (H-157): sc-292393. Western blot analysis of BSPII expression in CCD-1064Sk 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.



Try **BSPII (LFMb-24): sc-73634** or **BSPII (LFMb-25): sc-73630**, our highly recommended monoclonal alternatives to BSPII (H-157).