Osteoadherin (2J11): sc-134410



The Power to Question

BACKGROUND

Osteoadherin (OSAD) is a bone proteoglycan containing keratan sulfate that belongs to the small leucine-rich proteoglycan (SLRP) family. Osteoadherin promotes Integrin $\alpha V/\beta 3$ -mediated cell binding. The central region of Osteoadherin consists of 11 B-type, leucine-rich repeats ranging in length from 20 to 30 residues. The full, primary sequence of Osteoadherin contains four putative sites for tyrosine sulfation, three of which are at the N-terminal end of the molecule, six assumed sites for N-linked glycosylation, and a large and very acidic C-terminal domain, which is unique to Osteoadherin. Expression of Osteoadherin is limited to extracellular space and the extracellular matrix, as it is a secreted protein.

REFERENCES

- 1. Sommarin, Y., Wendel, M., Shen, Z., Hellman, U. and Heinegârd, D. 1998. Osteoadherin, a cell-binding keratan sulfate proteoglycan in bone, belongs to the family of leucine-rich repeat proteins of the extracellular matrix. J. Biol. Chem. 273: 16723-16729.
- 2. Wendel, M., Sommarin, Y. and Heinegârd, D. 1998. Bone matrix proteins: isolation and characterization of a novel cell-binding keratan sulfate proteoglycan (Osteoadherin) from bovine bone. J. Cell Biol. 141: 839-847.
- Buchaille, R., Couble, M.L., Magloire, H. and Bleicher, F. 2000. Expression
 of the small leucine-rich proteoglycan Osteoadherin/osteomodulin in human
 dental pulp and developing rat teeth. Bone 27: 265-270.
- Matsushima, N., Ohyanagi, T., Tanaka, T. and Kretsinger, R.H. 2000.
 Super-motifs and evolution of tandem leucine-rich repeats within the small proteoglycans—Biglycan, Decorin, Lumican, Fibromodulin, PRELP, Keratocan, Osteoadherin, epiphycan, and Osteoglycin. Proteins 38: 210-225.
- Shen, Z., Gantcheva, S., Sommarin, Y. and Heinegârd, D. 2000. Tissue distribution of a novel cell binding protein, Osteoadherin, in the rat. Matrix Biol. 18: 533-542.
- Lucchini, M., Romeas, A., Couble, M.L., Bleicher, F., Magloire, H. and Farges, J.C. 2002. TGFβ1 signaling and stimulation of Osteoadherin in human odontobla in vitro. Connect. Tissue Res. 43: 345-353.
- 7. Ramstad, V.E., Franzen, A., Heinegârd, D., Wendel, M. and Reinholt, F.P. 2003. Ultrastructural distribution of Osteoadherin in rat bone shows a pattern similar to that of bone sialoprotein. Calcif. Tissue Int. 72: 57-64.
- 8. Lucchini, M., Couble, M.L., Romeas, A., Staquet, M.J., Bleicher, F., Magloire, H. and Farges, J.C. 2004. αV $\beta 3$ Integrin expression in human odontoblasts and co-localization with Osteoadherin. J. Dent. Res. 83: 552-556.
- 9. Solberg, L.B., Melhus, G., Brorson, S.H., Wendel, M. and Reinholt, F.P. 2006. Heat from Lowicryl sections of bone. Micron 37: 347-354.

CHROMOSOMAL LOCATION

Genetic locus: OMD (human) mapping to 9q22.31.

STORAGE

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

SOURCE

Osteoadherin (2J11) is a mouse monoclonal antibody raised against recombinant Osteoadherin protein of human origin.

PRODUCT

Each vial contains 100 μg lgG_3 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Osteoadherin (2J11) is recommended for detection of Osteoadherin of human 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

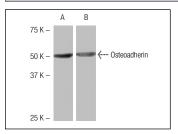
Suitable for use as control antibody for Osteoadherin siRNA (h): sc-61265, Osteoadherin shRNA Plasmid (h): sc-61265-SH and Osteoadherin shRNA (h) Lentiviral Particles: sc-61265-V.

Molecular Weight of Osteoadherin: 60 kDa

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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).

DATA



Osteoadherin (2J11): sc-134410. Western blot analysis of Osteoadherin expression in human Osteoadherin transfected (A) and non-transfected (B) 293T whole cell Iysates.

RESEARCH USE

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

PROTOCOLS

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