

Osteoglycin (K-14): sc-47277

BACKGROUND

The small leucine-rich proteoglycan (SLRP) family of proteins contains various proteins such as Decorin, Biglycan, Fibromodulin, Keratocan, Lumican, Osteoadherin and Osteoglycin. These proteins all have similar functions as they all mediate extracellular matrix organization and act as binding partners of TGF β . Osteoglycin, which also may be designated osteoinductive factor (OIF), is a secreted protein detected in bone tissues. Osteoglycin induces the formation of bone in conjunction with either TGF β 1 or TGF β 2. The precursor form of the OGN gene product, designated Mimecan, is subject to *in situ* proteolytic cleavage to yield the mature Osteoglycin.

REFERENCES

1. Tasheva, E.S., et al. 1997. Differential splicing and alternative polyadenylation generate multiple Mimecan mRNA transcripts. *J. Biol. Chem.* 272: 32551-32556.
2. Tasheva, E.S., et al. 1999. The bovine Mimecan gene. Molecular cloning and characterization of two major RNA transcripts generated by alternative use of two splice acceptor sites in the third exon. *J. Biol. Chem.* 274: 18693-18701.
3. Pellegata, N.S., et al. 2000. Mutations in KERA, encoding Keratocan, cause cornea plana. *Nat. Genet.* 25: 91-95.
4. Tasheva, E.S., et al. 2004. Analysis of transcriptional regulation of the small leucine rich proteoglycans. *Mol. Vis.* 10: 758-772.
5. Wang, X., et al. 2005. Characterization of the non-collagenous proteins in avian cortical and medullary bone. *Comp. Biochem. Physiol. B, Biochem. Mol. Biol.* 140: 665-672.
6. Moali, C., et al. 2005. Substrate-specific modulation of a multi-substrate proteinase. C-terminal processing of fibrillar procollagens is the only BMP-1 dependent activity to be enhanced by PCPE-1. *J. Biol. Chem.* 280: 24188-24194
7. Xie, J., et al. 2005. Adsorption of serum fetuin to hydroxylapatite does not contribute to osteoblast phenotype modifications. *J. Biomed. Mater. Res. A* 73: 39-47.

CHROMOSOMAL LOCATION

Genetic locus: OGN (human) mapping to 9q22.31; Ogn (mouse) mapping to 13 A5.

SOURCE

Osteoglycin (K-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Osteoglycin 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.

Blocking peptide available for competition studies, sc-47277 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Osteoglycin (K-14) is recommended for detection of Osteoglycin and Osteoglycin precursor (Mimecan) of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Osteoglycin (K-14) is also recommended for detection of Osteoglycin and Osteoglycin precursor (Mimecan) in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Osteoglycin siRNA (h): sc-61267, Osteoglycin siRNA (m): sc-61268, Osteoglycin shRNA Plasmid (h): sc-61267-SH, Osteoglycin shRNA Plasmid (m): sc-61268-SH, Osteoglycin shRNA (h) Lentiviral Particles: sc-61267-V and Osteoglycin shRNA (m) Lentiviral Particles: sc-61268-V.

Molecular Weight of Osteoglycin precursor (Mimecan): 34 kDa.

Molecular Weight of mature/glycosylated Osteoglycin: 12-25 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Y79 cell lysate: sc-2240 or NIH/3T3 whole cell lysate: sc-2210.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Vallejo-Illarramendi, A., et al. 2009. Focal adhesion kinase is required for neural crest cell morphogenesis during mouse cardiovascular development. *J. Clin. Invest.* 119: 2218-2230.

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 **Osteoglycin (G-1): sc-374463** or **Osteoglycin (E-9): sc-365228**, our highly recommended monoclonal alternatives to Osteoglycin (K-14).