

# Osteoglycin (E-9): sc-365228

## 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 $\beta$ . 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 $\beta$ 1 or TGF $\beta$ 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Osteoglycin (E-9) is a mouse monoclonal antibody raised against amino acids 21-90 mapping near the N-terminus of Osteoglycin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $\gamma$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Osteoglycin (E-9) 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), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 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: 34 kDa.

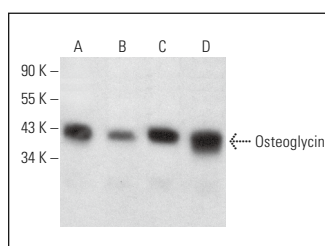
Molecular Weight of mature/glycosylated Osteoglycin: 12-25 kDa.

Positive Controls: Y79 cell lysate: sc-2240, CCRF-CEM cell lysate: sc-2225 or Jurkat whole cell lysate: sc-2204.

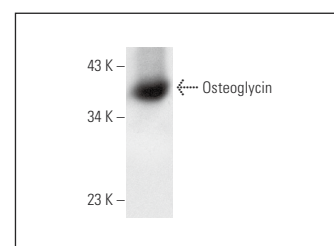
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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



Osteoglycin (E-9): sc-365228. Western blot analysis of Osteoglycin expression in CCRF-CEM (A), Jurkat (B), MOLT-4 (C) and COLO 320DM (D) whole cell lysates.



Osteoglycin (E-9): sc-365228. Western blot analysis of Osteoglycin expression in Y79 whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Jana, S., et al. 2018. Disparate remodeling of the extracellular matrix and proteoglycans in failing pediatric versus adult hearts. *J. Am. Heart Assoc.* 7: e010427.
2. Liu, Y., et al. 2018. Protective effects of  $\alpha$ -2-Macroglobulin on human bone marrow mesenchymal stem cells in radiation injury. *Mol. Med. Rep.* 18: 4219-4228.
3. Camino, T., et al. 2022. Human obese white adipose tissue sheds depot-specific extracellular vesicles and reveals candidate biomarkers for monitoring obesity and its comorbidities. *Transl. Res.* 239: 85-102.

## 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](http://www.scbt.com) for detailed protocols and support products.