

Osteoglycin (G-1): sc-374463

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.

CHROMOSOMAL LOCATION

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

SOURCE

Osteoglycin (G-1) is a mouse monoclonal antibody raised against amino acids 21-90 mapping near the N-terminus of Osteoglycin of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Osteoglycin (G-1) is available conjugated to agarose (sc-374463 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374463 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374463 PE), fluorescein (sc-374463 FITC), Alexa Fluor[®] 488 (sc-374463 AF488), Alexa Fluor[®] 546 (sc-374463 AF546), Alexa Fluor[®] 594 (sc-374463 AF594) or Alexa Fluor[®] 647 (sc-374463 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-374463 AF680) or Alexa Fluor[®] 790 (sc-374463 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

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

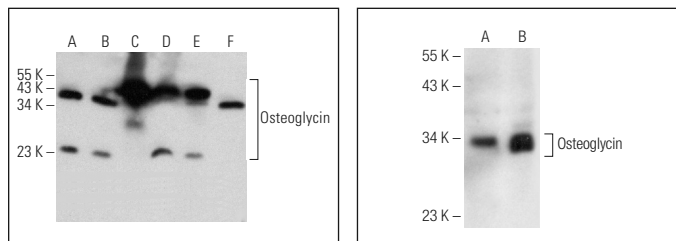
Molecular Weight of mature/glycosylated Osteoglycin: 12-25 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, NIH/3T3 whole cell lysate: sc-2210 or HeLa whole cell lysate: sc-2200.

STORAGE

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

DATA



Osteoglycin (G-1): sc-374463. Western blot analysis of Osteoglycin expression in CCRF-CEM (A), MCF7 (B), C3H/10T1/2 (C), C2C12 (D), A-10 (E) and RPE-J (F) whole cell lysates.

Osteoglycin (G-1): sc-374463. Western blot analysis of Osteoglycin expression in NIH/3T3 (A) and HeLa (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Zhang, X., et al. 2015. Crif1 promotes adipogenic differentiation of bone marrow mesenchymal stem cells after irradiation by modulating the PKA/CREB signaling pathway. *Stem Cells* 33: 1915-1926.
- Barallobre-Barreiro, J., et al. 2016. Glycoproteomics reveals decorin peptides with anti-myostatin activity in human atrial fibrillation. *Circulation* 134: 817-832.
- Wu, Q.H., et al. 2017. Loss of Osteoglycin promotes angiogenesis in limb ischaemia mouse models via modulation of vascular endothelial growth factor and vascular endothelial growth factor receptor 2 signalling pathway. *Cardiovasc. Res.* 113: 70-80.
- Zhang, W., et al. 2019. Long noncoding RNA TUG1 inhibits osteogenesis of bone marrow mesenchymal stem cells via Smad5 after irradiation. *Theranostics* 9: 2198-2208.
- Fang, Y., et al. 2020. Osteoglycin silencing exerts inhibitory effects on myocardial fibrosis and epithelial/endothelial-mesenchymal transformation in a mouse model of myocarditis. *Biofactors* 46: 1018-1030.
- Lahiri, S., et al. 2021. MALDI-IMS combined with shotgun proteomics identify and localize new factors in male infertility. *Life Sci. Alliance* 4: e202000672.
- Stöckl, J.B., et al. 2021. Age-related alterations in the testicular proteome of a non-human primate. *Cells* 10: 1306.
- Qian, S.J., et al. 2021. Single-cell RNA sequencing identifies new inflammation-promoting cell subsets in asian patients with chronic periodontitis. *Front. Immunol.* 12: 711337.
- Gopinath, P., et al. 2022. Identification of tumor biomarkers for pathological complete response to neoadjuvant treatment in locally advanced breast cancer. *Breast Cancer Res. Treat.* 194: 207-220.

RESEARCH USE

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