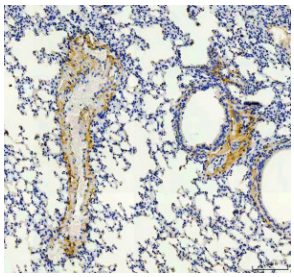
OIF Antibody / Osteoinductive Factor Polyclonal Antibody (RQ4434)

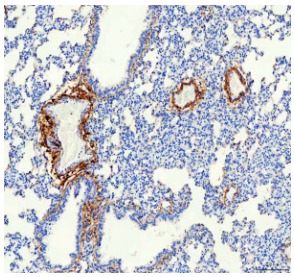
Catalog No.	Formulation	Size
RQ4434	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

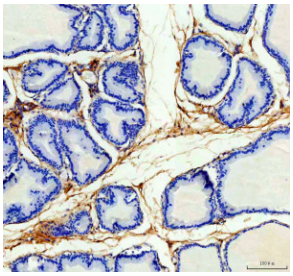
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q62000
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Direct ELISA: 0.1-0.5ug/ml (recombinant mouse protein) (BSA-free format available)
Limitations	This OIF Antibody / Osteoinductive Factor Polyclonal Antibody is available for research use only.



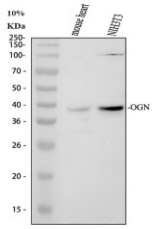
OIF Antibody by IHC in Mouse Lung. Immunohistochemistry of paraffin-embedded mouse lung sections using OIF Antibody. Strong extracellular and pericellular staining is visible around pulmonary blood vessels and airway-associated structures, while much of the surrounding alveolar parenchyma shows comparatively limited labeling. The Osteoinductive Factor Polyclonal Antibody demonstrates a matrix-associated OGN staining pattern that is particularly prominent in connective tissue surrounding vascular and bronchial structures.



OIF Antibody by IHC in Rat Lung. Immunohistochemistry of paraffin-embedded rat lung sections using OIF Antibody. Strong OGN/OIF staining is concentrated in connective tissue surrounding pulmonary vascular and airway-associated structures, with weaker labeling of some airway epithelium and comparatively limited staining throughout the alveolar parenchyma. The Osteoinductive Factor Polyclonal Antibody demonstrates a predominantly extracellular and pericellular staining pattern consistent with the extracellular matrix association of osteoglycin.



OIF Antibody by IHC in Rat Bladder. Immunohistochemistry of paraffin-embedded rat bladder sections using OIF Antibody. Strong extracellular and stromal staining is visible around glandular and epithelial structures, while the epithelial cells themselves show substantially less labeling. The Osteoinductive Factor Polyclonal Antibody demonstrates prominent OGN localization within the supporting connective tissue and extracellular matrix surrounding these structures, with little nuclear staining.



OIF Antibody by WB in Mouse Heart and NIH3T3 Cells. Western blot testing of mouse heart tissue lysate (lane 1) and mouse NIH3T3 whole cell lysate (lane 2) with OIF Antibody. A prominent band is detected at approximately 40 kDa in both samples, slightly above the predicted 34 kDa molecular weight of OGN. The Osteoinductive Factor Polyclonal Antibody produces particularly strong target-region reactivity in NIH3T3 cells, while mouse heart shows a weaker but distinct band at a similar position. Migration above the calculated protein mass is compatible with post-translational modification of osteoglycin.

Description

OIF Antibody recognizes osteoglycin (OGN), an extracellular matrix protein also known as osteoinductive factor, mimecan and SLRR3A. Osteoglycin belongs to the small leucine-rich proteoglycan family, a group of extracellular proteins characterized by tandem leucine-rich repeat motifs. Members of this family interact with structural and signaling components of the extracellular matrix and contribute to the organization, assembly and remodeling of connective tissues. OGN was initially identified through studies of bone-associated proteins and subsequently characterized in a variety of tissues.

Osteoglycin is synthesized as a secreted precursor that undergoes post-translational processing and glycosylation. The mature protein contains leucine-rich repeats that contribute to protein-protein interactions within the extracellular environment. OGN can associate with collagen-containing matrices and has been implicated in the regulation of collagen fibrillogenesis and extracellular matrix architecture. An Osteoinductive Factor Polyclonal Antibody can therefore support studies examining OGN expression in connective tissue organization, matrix remodeling and tissue homeostasis.

Despite its historical designation as osteoinductive factor, OGN is not restricted to bone biology. Its expression has been investigated in cardiovascular, pulmonary, skeletal and other connective tissues, where it may influence structural organization and responses to tissue injury. Osteoglycin has also been linked to regulation of cell growth, differentiation and signaling pathways that operate within the extracellular matrix microenvironment. Changes in OGN expression have consequently been studied in fibrosis, cardiovascular remodeling, musculoskeletal biology and cancer.

Osteoglycin is particularly interesting because its apparent molecular weight can vary substantially depending on processing and glycosylation. The predicted polypeptide is approximately 34 kDa, while experimentally detected forms can migrate at higher molecular weights. This biochemical heterogeneity reflects the extracellular and post-translationally modified nature of OGN and should be considered when evaluating protein expression. NSJ Bioreagents provides this Osteoinductive Factor Polyclonal Antibody for research into OGN biology and extracellular matrix regulation.

An OIF Antibody can be used to investigate osteoglycin expression, extracellular matrix organization, collagen-associated biology, connective tissue remodeling and signaling processes involving this small leucine-rich proteoglycan.

Explore additional reagents for extracellular matrix and cellular signaling research in our Signal Transduction Antibodies collection.

Application Notes

Optimal dilution of the OIF Antibody / Osteoinductive Factor Polyclonal Antibody should be determined by the researcher.

Immunogen

A mouse partial recombinant protein corresponding to amino acids A20-F298 was used as the immunogen for the Oif antibody.

Storage

After reconstitution, the Oif antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Osteoinductive Factor antibody, Osteoglycin antibody, OGN antibody, Mimecan antibody, Osteoglycin Precursor antibody, SLRR3A antibody

Copyright © NSJ Bioreagents. All rights reserved.