

Periostin (S-15): sc-49480

BACKGROUND

Periostin (PN), also designated osteoblast-specific factor 2 (OSF-2), is a disulfide linked protein originally isolated as a osteoblast-specific factor. Periostin is a secreted protein that binds heparin and functions as a ligand for $\alpha V\beta 3$ and $\alpha V\beta 5$ Integrins. In preosteoblasts, Periostin acts as a cell adhesion molecule and plays a role in osteoblast recruitment, spreading and attachment. Periostin is mainly detected in lower gastrointestinal tract, aorta, stomach, placenta, uterus and breast tissues but is upregulated in epithelial ovarian tumors and overexpressed in breast cancer. Expression of Periostin is increased by bone morphogenetic protein (BMP2) and transforming growth factor $\beta 1$ (TGF $\beta 1$). Periostin contains a typical signal sequence, followed by a cysteine-rich domain; a fourfold repeated domain, which shows homology with the insect protein fasciclin; and a C-terminal domain.

CHROMOSOMAL LOCATION

Genetic locus: POSTN (human) mapping to 13q13.3; Postn (mouse) mapping to 3 C.

SOURCE

Periostin (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Periostin 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-49480 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Periostin (S-15) is recommended for detection of Periostin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Periostin (S-15) is also recommended for detection of Periostin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Periostin siRNA (h): sc-61324, Periostin siRNA (m): sc-61325, Periostin shRNA Plasmid (h): sc-61324-SH, Periostin shRNA Plasmid (m): sc-61325-SH, Periostin shRNA (h) Lentiviral Particles: sc-61324-V and Periostin shRNA (m) Lentiviral Particles: sc-61325-V.

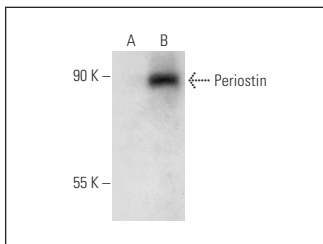
Molecular Weight of Periostin: 90 kDa.

Positive Controls: Periostin (m): 293T Lysate: sc-122489.

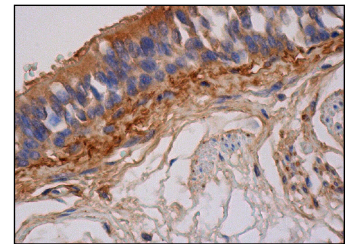
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Periostin (S-15): sc-49480. Western blot analysis of Periostin expression in non-transfected: sc-117752 (A) and mouse Periostin transfected: sc-122489 (B) 293T whole cell lysates.



Periostin (S-15): sc-49480. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Jackson-Boeters, L., et al. 2009. Periostin localizes to cells in normal skin, but is associated with the extracellular matrix during wound repair. *J. Cell. Commun. Signal.* 3: 125-133.
- Zhu, J. and Carver, W. 2012. Effects of interleukin-33 on cardiac fibroblast gene expression and activity. *Cytokine* 58: 368-379.
- Elliott, C.G., et al. 2012. Periostin modulates myofibroblast differentiation during full-thickness cutaneous wound repair. *J. Cell Sci.* 125: 121-132.
- Qi, L. and Zhang, Y. 2014. The microRNA 132 regulates fluid shear stress-induced differentiation in periodontal ligament cells through mTOR signaling pathway. *Cell. Physiol. Biochem.* 33: 433-445.
- Cardinale, V., et al. 2015. Profiles of cancer stem cell subpopulations in cholangiocarcinomas. *Am. J. Pathol.* 185: 1724-1739.

RESEARCH USE

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



Try **Periostin (F-10): sc-398631**, our highly recommended monoclonal alternative to Periostin (S-15). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Periostin (F-10): sc-398631**.