SANTA CRUZ BIOTECHNOLOGY, INC.

Periostin (F-10): sc-398631

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 up-regulated in epithelial ovarian tumors and overexpressed in breast cancer. Expression of Periostin is increased by bone morphogenetic protein (BMP2) and transforming growth factor β1 (TGFβ1). 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 (F-10) is a mouse monoclonal antibody raised against amino acids 537-836 mapping at the C-terminus of Periostin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Periostin (F-10) is available conjugated to agarose (sc-398631 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398631 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398631 PE), fluorescein (sc-398631 FITC), Alexa Fluor® 488 (sc-398631 AF488), Alexa Fluor® 546 (sc-398631 AF546), Alexa Fluor® 594 (sc-398631 AF594) or Alexa Fluor® 647 (sc-398631 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398631 AF680) or Alexa Fluor® 790 (sc-398631 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Periostin (F-10) is recommended for detection of Periostin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

Suitable for use as control antibody for Periostin siRNA (h): sc-61324, Periostin siRNA (m): sc-61325, Periostin siRNA (r): sc-270567, Periostin shRNA Plasmid (h): sc-61324-SH, Periostin shRNA Plasmid (m): sc-61325-SH, Periostin shRNA Plasmid (r): sc-270567-SH, Periostin shRNA (h) Lentiviral Particles: sc-61324-V, Periostin shRNA (m) Lentiviral Particles: sc-61325-V and Periostin shRNA (r) Lentiviral Particles: sc-270567-V.

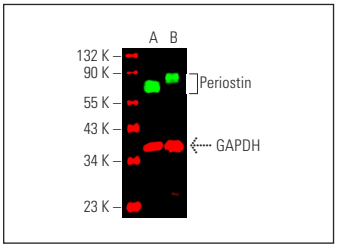
Molecular Weight of Periostin secreted glycoprotein: 90 kDa.

Molecular Weight of Periostin: 84/74 kDa.

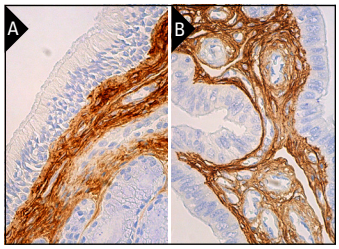
STORAGE

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

DATA



Simultaneous direct near-infrared western blot analysis of Periostin expression, detected with Periostin (F-10) Alexa Fluor® 680: sc-398631 AF680 and GAPDH expression, detected with GAPDH (G-9) Alexa Fluor® 790: sc-365062 AF790 in human stomach (**A**) and human lung (**B**) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 790: sc-516731.



Periostin (F-10): sc-398631. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx (**A**) and human fallopian tube (**B**) tissue showing extracellular matrix staining.

SELECT PRODUCT CITATIONS

1. Xu, H.Y., et al. 2017. Periostin is essential for periodontal ligament remodeling during orthodontic treatment. Mol. Med. Rep. 15: 1800-1806.
2. Bruns, D.R., et al. 2019. The right ventricular fibroblast secretome drives cardiomyocyte dedifferentiation. PLoS ONE 14: e0220573.
3. Gumina, S., et al. 2019. The attempt of spontaneous repair of rotator cuff tear: the role of Periostin. J. Orthop. 16: 400-404.
4. Choi, Y., et al. 2020. Upregulation of Periostin in MOG-induced experimental autoimmune encephalomyelitis in mice. Neurosci. Lett. 715: 134558.
5. Hu, L., et al. 2020. Regeneration characteristics of different dental derived stem cell sheets. J. Oral Rehabil. 47: 66-72.
6. Solé-Boldo, L., et al. 2020. Single-cell transcriptomes of the human skin reveal age-related loss of fibroblast priming. Commun. Biol. 3: 188.
7. Lin, R., et al. 2020. MiR-1468-3p promotes aging-related cardiac fibrosis. Mol. Ther. Nucleic Acids 20: 589-605.
8. Eroglu, S., et al. 2020. Serum and placental Periostin levels in women with early pregnancy loss. J. Reprod. Immunol. 140: 103138.
9. Kim, C.S., et al. 2020. Glutamine metabolism controls stem cell fate reversibility and long-term maintenance in the hair follicle. Cell Metab. 32: 629-642.e8.
10. Wu, J., et al. 2021. Periostin contributes to immunoglobulin a nephropathy by promoting the proliferation of mesangial cells: a weighted gene correlation network analysis. Front. Genet. 11: 595757.

RESEARCH USE

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