

# Product Datasheet

## Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free NBP1-30042

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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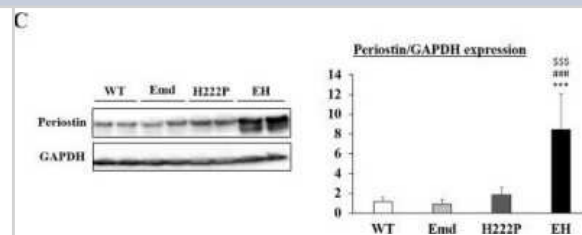
**NBP1-30042**

Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free

<b>Product Information</b>	
<b>Unit Size</b>	0.1 ml
<b>Concentration</b>	Please see the vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Store at -20C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Polyclonal
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG
<b>Purity</b>	Antigen Affinity-purified
<b>Buffer</b>	PBS
<b>Target Molecular Weight</b>	93 kDa
<b>Product Description</b>	
<b>Description</b>	Recommended that the undiluted antibody be aliquoted into smaller working volumes (10-30 uL/vial depending on usage).
<b>Host</b>	Rabbit
<b>Gene ID</b>	10631
<b>Gene Symbol</b>	POSTN
<b>Species</b>	Human, Mouse, Rat, Chicken
<b>Reactivity Notes</b>	Expected reactivity to all mammalian and avian species. Based on customer review rabbit reacts.
<b>Specificity/Sensitivity</b>	Specific for the ~93 kDa periostin doublet in mouse lung extract. Consistent with the fact that this antibody is made against an alternatively spliced region of periostin, this antibody recognizes only the largest two of the three forms of periostin recognized on Western blots by the Pan periostin antibody and also shows a distinctive staining pattern by immunohistochemistry. The antibody works well for immunohistochemistry on paraformaldehyde-fixed sections with a simple antigen-retrieval protocol (incubate slides for 20 minutes at 90 degrees C in 10 mM sodium citrate (pH 6.0)/ 0.1 % Tween-20).
<b>Immunogen</b>	Bacterial fusion protein equivalent to a 188-amino acid polypeptide from the C-terminal region of mouse periostin which is comprised of six small alternatively-spliced exons. Accession # Q62009
<b>Product Application Details</b>	
<b>Applications</b>	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Knockout Validated
<b>Recommended Dilutions</b>	Western Blot 1:1000, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:100, Immunohistochemistry-Frozen, Knockout Validated
<b>Application Notes</b>	For IHC-P antigen retrieval protocol (incubate slides for 20 minutes at 90 degrees C in 10 mM sodium citrate (pH 6.0)/ 0.1 % Tween-20). Immunocytochemistry/Immunofluorescence was reported in scientific literature. Use in Immunohistochemistry-Frozen reported in scientific literature (PMID: 31430335).

## Images

Western Blot: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Skeletal muscle pathology of mice at 12 weeks of age. Western blot analyses of periostin from soleus muscle. The graph shows quantification of periostin levels normalized to GAPDH (n = 4). Image collected and cropped by CiteAb from the following publication ([dx.plos.org/10.1371/journal.pone.0221512](https://doi.org/10.1371/journal.pone.0221512)), licensed under a CC-BY license.



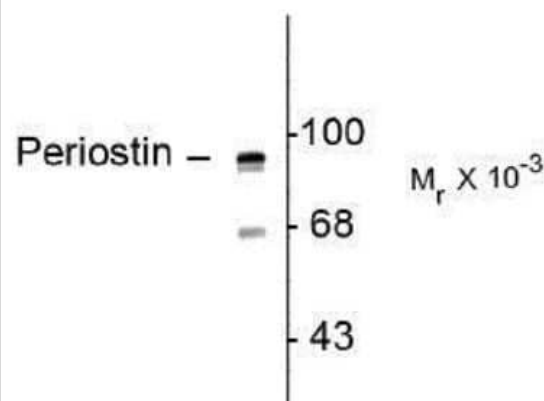
Immunocytochemistry/Immunofluorescence: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Skeletal muscle pathology of mice at 12 weeks of age. Immunostaining of laminin a2 (green) and periostin (red) with DAPI (blue) from soleus muscle. Image collected and cropped by CiteAb from the following publication ([dx.plos.org/10.1371/journal.pone.0221512](https://doi.org/10.1371/journal.pone.0221512)), licensed under a CC-BY license.



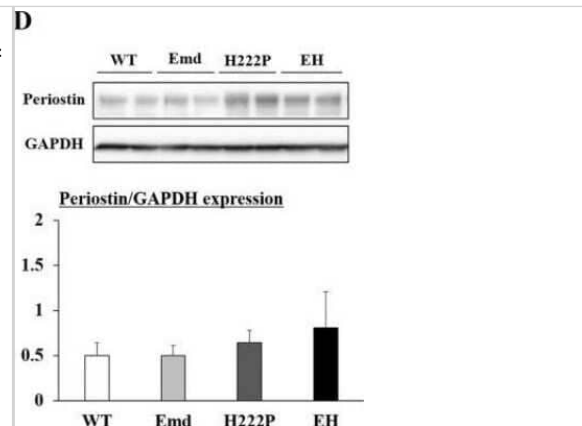
Immunohistochemistry: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Analysis of periostin in rabbit periosteum. Image courtesy of product review submitted by Samer Zaky.



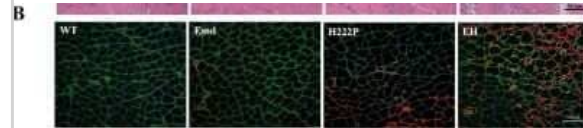
Western Blot: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Rat lung lysate showing specific immunolabeling of the ~ 93 kDa periostin protein doublet.



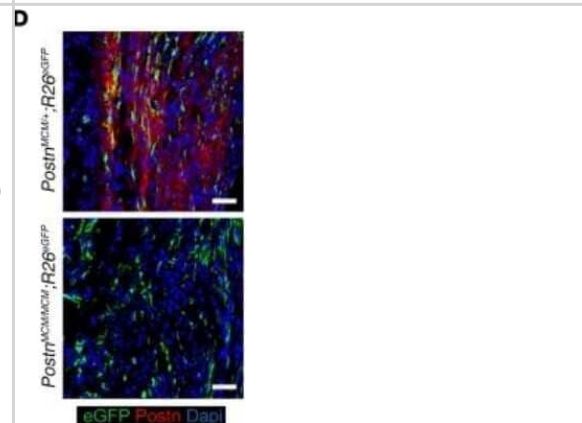
Western Blot: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Cardiac muscle phenotypes of mice at 12 weeks of age. Western blot analyses of periostin. The graph shows the quantification of periostin levels normalized to GAPDH (n = 3). Image collected and cropped by CiteAb from the following publication ([dx.plos.org/10.1371/journal.pone.0221512](https://doi.org/10.1371/journal.pone.0221512)), licensed under a CC-BY license.



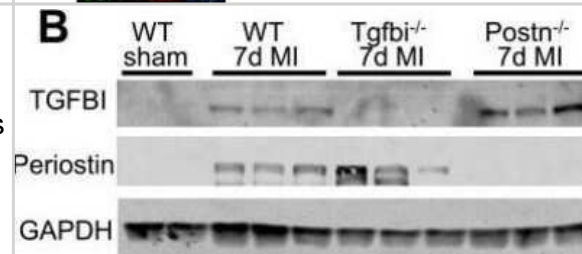
Immunocytochemistry/Immunofluorescence: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Cardiac muscle phenotypes of mice at 12 weeks of age. Immunostaining of laminin a2 (green) and periostin (red) with DAPI (blue) from cardiac muscle. Image collected and cropped by CiteAb from the following publication ([dx.plos.org/10.1371/journal.pone.0221512](https://doi.org/10.1371/journal.pone.0221512)), licensed under a CC-BY license.



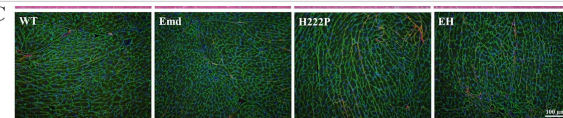
Immunohistochemistry: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Representative IHC images from 3 separate hearts analyzed for Periostin/OSF-2 protein expression within the infarct region of hearts from *Postn<sup>MCM/+</sup>; R26<sup>EGFP</sup>* mice versus *Postn<sup>MCM/MCM</sup>; R26<sup>EGFP</sup>* mice 2 weeks after MI. Nuclei are shown with DAPI (blue). Scale bars: 20  $\mu$ m. *Postn* lineage-traced cells (EGFP+) cells are also shown. Image collected and cropped by CiteAb from the following publication ([//pubmed.ncbi.nlm.nih.gov/29664017/](https://pubmed.ncbi.nlm.nih.gov/29664017/)) licensed under a CC-BY license.



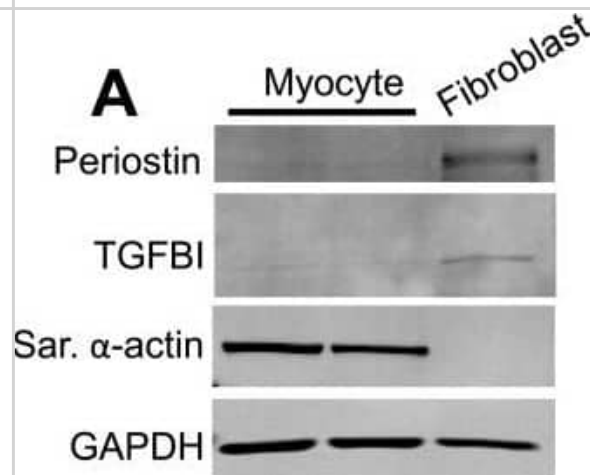
Knockout Validated: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Loss of *Tgfb1* does not alter disease progression after MI. Western blot analysis for TGFBI and periostin from isolated infarct areas of the hearts of the indicated groups of mice 7 days after MI. GAPDH was used as a loading control. Image collected and cropped by CiteAb from the following publication ([journals.plos.org/plosone/article?id=10.1371/journal.pone.0181945](https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0181945)), licensed under a CC-BY license.



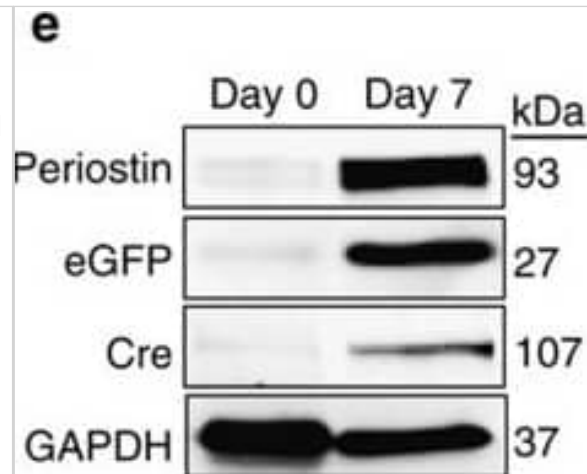
Immunocytochemistry/ Immunofluorescence: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - Cardiac muscle phenotypes of mice at 12 weeks of age. (A) Evaluation of cardiac function by transthoracic echocardiographic analyses. Left ventricular ejection fractions (LVEFs) are shown (n = 8–9). (B) H&E staining of cryosections from cardiac muscle. (C) Immunostaining of laminin  $\alpha 2$  (green) & periostin (red) with DAPI (blue) from cardiac muscle. (D) Western blot analyses of periostin. The graph shows the quantification of periostin levels normalized to GAPDH (n = 3). (E) qPCR analyses of *Tgfb2* (TGF  $\beta 2$ ), *Postn* (periostin), & *Fn1* (fibronectin) mRNA levels in cardiac muscle (n = 4). (F) qPCR analyses of *Nppa* (natriuretic peptide A) & *Nppb* (natriuretic peptide B) mRNA levels in cardiac muscle (n = 4). In qPCR analyses, data were normalized by *Gapdh* mRNA & expressed as fold increases from WT mice. \*\*\*P<0.001 compared with WT mice. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31430335>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - TGFBI & periostin are induced in the heart after injury. (A) Western blot analysis of periostin & TGFBI in isolated adult cardiomyocytes & fibroblasts. Sarcomeric  $\alpha$ -actin was used as a control for cardiomyocyte purity & GAPDH was used as a loading control. (B) Quantitative real time PCR for *Postn* & *Tgfb1* from 1 week sham or MI-operated hearts. mRNA levels were normalized to 18s ribosomal RNA. \*p<0.05 for both genes in MI-operated animals compared to sham animals using an unpaired Student's T-test. n = 3 animals. (C) Western blot analysis for periostin & TGFBI in the infarcted areas isolated from hearts 24 hours, 7 & 14 days after MI surgery. GAPDH was used as a loading control. Each lane corresponds to protein from one mouse. (D & E) Quantification of TGFBI (D) & periostin (E) protein levels from the conditions shown in panel C except that 3 hearts were analyzed in total each. (F) Immunohistochemistry for the indicated markers/proteins on sham or MI-operated hearts after 1 week. Images were taken at 400x magnification. Scale = 20  $\mu$ m. Image collected & cropped by CiteAb from the following publication (<https://dx.plos.org/10.1371/journal.pone.0181945>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: Periostin/OSF-2 Antibody - C-terminus - Azide and BSA Free [NBP1-30042] - PostnMCM allele activity in vivo. (a) Schematic representation of the Postn genetic locus with a tamoxifen-regulated MerCreMer cDNA cassette inserted into exon 1 (E1), which was crossed with Rosa26 reporter mice (R26-eGFP) containing loxP sites flanking a stop cassette upstream of eGFP to allow for Cre-dependent lineage tracing. (b) Experimental scheme whereby PostnMCM/+; R26-eGFP mice were given tamoxifen for 8 weeks before harvesting at 16 weeks. (c) Representative histological section from the heart of mice described in a & b, which show exceptionally rare labelling of interstitial cells at baseline (arrow) with 8 weeks of tamoxifen. Nuclei are stained in blue. Inset shows  $\alpha$ -actin stained cardiomyocytes (red) surrounding the one eGFP-labelled interstitial cell (green) (n=4 mice). (d) Experimental scheme whereby PostnMCM/+; R26-eGFP mice were MI injured or subjected to a sham procedure, then given tamoxifen for 1 week before harvesting. (e) Western blot analysis for periostin, eGFP, Cre (MerCreMer protein) & GAPDH as a control at day 0 before injury or day 7 after MI injury with 1 week of tamoxifen (n=3 mice per condition). (f) Representative histological sections showing eGFP-labelled interstitial cells in hearts of PostnMCM/+; R26-eGFP after MI injury with 7 days of tamoxifen labelling, but not with a sham procedure (n=6 mice for MI & n=3 for sham). (g) Whole-mount fluorescent images of hearts from PostnMCM/+; R26-eGFP mice for direct eGFP fluorescence over the given time course shown. A no tamoxifen control 7 days after MI is also shown (n=3 mice per time point & condition). Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/27447449>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





## Publications

Krivanek J, Soldatov RA, Kastriti ME et al. Dental cell type atlas reveals stem and differentiated cell types in mouse and human teeth *Nature Communications* 2020-09-23 [PMID: 32968047]

Bowers SLK, Meng Q, Kuwabara Y et al. Col1a2-Deleted Mice Have Defective Type I Collagen and Secondary Reactive Cardiac Fibrosis with Altered Hypertrophic Dynamics *Cells* 2023-08-30 [PMID: 37681905] (Flow Cytometry, Western Blot, Immunocytochemistry/ Immunofluorescence)

Lavicky J, Kolouskova M, Prochazka D et al. The Development of Dentin Microstructure Is Controlled by the Type of Adjacent Epithelium *Journal of Bone and Mineral Research* 2022-02-01 [PMID: 34783080] (Immunohistochemistry-Frozen)

Lioux G, Liu X, Temiño S et al. A Second Heart Field-Derived Vasculogenic Niche Contributes to Cardiac Lymphatics *Developmental Cell* 2020-02-01 [PMID: 31928974]

Lee C, Cho S, Jeong D Inhibition of miR-25 Ameliorates Cardiac Dysfunction and Fibrosis by Restoring KLF4 Expression *Preprint* 2023-07-11 [PMID: 37569807] (WB, Mouse)

Wu M, Jin Q, Xu X et al. TP53RK Drives the Progression of Chronic Kidney Disease by Phosphorylating Birc5 *Advanced science (Weinheim, Baden-Wuerttemberg, Germany)* 2023-06-29 [PMID: 37382161] (WB, Human)

### Details:

1:500 WB dilution

Pang L, Dunterman M, Xuan W et al. Circadian regulator CLOCK promotes tumor angiogenesis in glioblastoma *Cell reports* 2023-02-14 [PMID: 36795563] (IHC, WB, Human)

Green LC, Slone S, Anthony SR et al. HuR-dependent expression of Wisp1 is necessary for TGF $\beta$ -induced cardiac myofibroblast activity *Journal of molecular and cellular cardiology* 2022-11-11 [PMID: 36372279] (WB, Mouse)

Huimei C, Gabriel C, Nithya D et al. The E3 ubiquitin ligase WWP2 regulates pro-fibrogenic monocyte infiltration and activity in heart fibrosis *Nature communications* 2022-11-30 [PMID: 36450710] (WB, Mouse)

Gargan S, Dowling P, Zweyer M et al. Proteomic Identification of Markers of Membrane Repair, Regeneration and Fibrosis in the Aged and Dystrophic Diaphragm *Life* 2022-10-22 [PMID: 36362832] (WB, Mouse)

Li S, Sun X, Wu H TRPA1 Promotes Cardiac Myofibroblast Transdifferentiation after Myocardial Infarction Injury via the Calcineurin-NFAT-DYRK1A Signaling Pathway *Oxid Med Cell Longev* 2019-06-21 [PMID: 31217840]

Vanini JV, Koyama LKS, de Matos LL et al. Epithelial-mesenchymal transition related to bone invasion in oral squamous cell carcinoma *Journal of Bone Oncology* 2022-04-01 [PMID: 35242512] (IHC-P, Human)

More publications at <http://www.novusbio.com/NBP1-30042>



### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NBP1-30042**

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HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP1-82472PEP	Periostin/OSF-2 Recombinant Protein Antigen

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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