bs-4917R

[Primary Antibody]

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Osteocalcin Rabbit pAb

DATASHEET -

Host: Rabbit Isotype: IgG

Clonality: Polyclonal

GeneID: 632 **SWISS:** P02818

Target: Osteocalcin

Immunogen: KLH conjugated synthetic peptide derived from human

Osteocalcin: 21-100/100.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50%

Glycerol.

Shipped at 4°C. Store at -20°C for one year. Avoid repeated

freeze/thaw cycles.

Background: Osteocalcin belongs to the osteocalcin/matrix Gla protein family

and constitutes 1 to 2% of the total bone protein. It is a 49 amino acid single chain vitamin K dependent protein, made by osteoblasts, and is a major component of the noncollagenous bone matrix. Post translational modification by a vitamin K dependent carboxylase produces three gamma carboxyglutamic acid residues at positions 17, 21 and 24, giving it a high affinity for

calcium. It also binds strongly to apatite.

Applications: WB (1:500-2000)

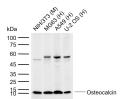
IHC-P (1:100-500) IHC-F (1:100-500) **IF** (1:100-500) **ELISA** (1:5000-10000)

Reactivity: Human, Mouse, Rat

Predicted MW.:

Subcellular Location: Secreted

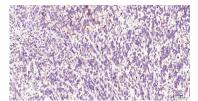
VALIDATION IMAGES



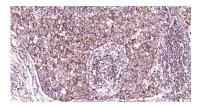
Sample: Lane 1: Mouse NIH/3T3 cell lysates Lane 2: Human MG63 cell lysates Lane 3: Human A549 cell lysates Lane 4: Human U-2 OS cell lysates Primary: Anti-Osteocalcin (bs-4917R) at 1/500 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 11 kDa Observed band size: 11 kDa



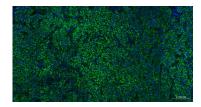
25 ug total protein per lane of various lysates (see on figure) probed with Osteocalcin polyclonal antibody, unconjugated (bs-4917R) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r.t. for 60 min.



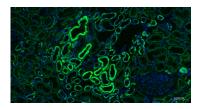
Paraformaldehyde-fixed, paraffin embedded Human Ewing's sarcoma; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with Osteocalcin Polyclonal Antibody, Unconjugated (bs-4917R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human Breast Cancer: Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 $\,$ min: The section was incubated with Osteocalcin Polyclonal Antibody, Unconjugated (bs-4917R) at 1:200 overnight at 4°C, followed by conjugation to the bs-0295G-HRP and DAB (C-0010) staining.



Paraformaldehyde-fixed, paraffin embedded Human Ovarian Cancer: Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 $\,$ min: The section was incubated with Osteocalcin Polyclonal Antibody, Unconjugated (bs-4917R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (green, bs-0295G-BF488), DAPI (blue, C02-04002) was used to stain the cell nuclei.



Paraformaldehyde-fixed, paraffin embedded Human Kidney: Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with Osteocalcin Polyclonal Antibody, Unconjugated (bs-4917R) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (green, bs-0295G-BF488), DAPI (blue, C02-04002) was used to stain the cell nuclei.

- SELECTED CITATIONS -

- [IF=19] Jia Song. et al. Manipulation of Surface Electrical Charge on Nanocomposite Membranes Confers Wide Spectrum Bactericidal Effects and Promotes Tissue Regeneration. ADV FUNCT MATER. 2024 Feb;:2314024 IF; Mouse. 10.1002/adfm.202314024
- [IF=18] Zetao Wang. et al. Nano-vibration exciter: Hypoxia-inducible factor 1 signaling pathway-mediated extracellular vesicles as bioactive glass substitutes for bone regeneration. BIOACT MATER. 2024 Oct;40:460 IF; Rat. 10.1016/j.bioactmat.2024.06.023
- [IF=17.6] Qingyun Fu. et al. Polydopamine-modified metal-organic frameworks nanoparticles enhance the corrosion resistance and bioactivity of polycaprolactone coating on high-purity magnesium. J MAGNES ALLOY. 2024 Feb;: IHC ;Rabbit. 10.1016/j.jma.2023.12.014
- [IF=17.1] Lu Tan. et al. Mechanically Robust Hemostatic Hydrogel Membranes with Programmable Strain-Adaptive Microdomain Entanglement for Wound Treatment in Dynamic Tissues. ACS NANO. 2024;XXXX(XXX):XXX-XXX IHC;Rat. 38457334
- [IF=17.2] Chen Renjie. et al. Bioactive Glass-Reinforced Hybrid Microfibrous Spheres Promote Bone Defect Repair via Stem Cell Delivery. ADV FIBER MATER. 2024 Sep;:1-14 IHC; Rat. 10.1007/s42765-024-00481-x