bs-0470R **[Primary Antibody]**

Osteocalcin Rabbit pAb

www.bioss.com.cn
sales@bioss.com.cn
techsupport@bioss.com.cn
400-901-9800

DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 632 **SWISS:** P02818

Target: Osteocalcin

Immunogen: KLH conjugated synthetic peptide derived from human BGP: 21-80/100.

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.

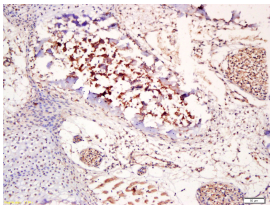
Applications: **IHC-P** (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Human, Mouse (predicted: Rat, Cow, Dog, Horse)

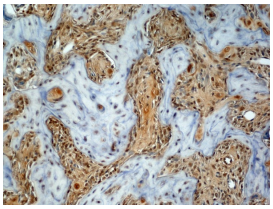
Predicted MW.: 11 kDa

Subcellular Location: Secreted

VALIDATION IMAGES



Tissue/cell: bone of mouse embryo; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-Osteocalcin Polyclonal Antibody, Unconjugated(bs-0470R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Generously provided by Markus Linder from Medical University Vienna as part of the Bioss Discovery Program. Formalin-fixed, paraffin embedded, and decalcified in EDTA mouse osteosarcoma labeled with Anti-Osteocalcin Polyclonal Antibody, Unconjugated (bs-0470R) at 1:100 followed by conjugation to the secondary antibody and DAB staining

SELECTED CITATIONS

- **[IF=16.744]** Jianxu Wei. et al. Switch-on mode of bioenergetic channels regulated by curcumin-loaded 3D composite scaffold to steer bone regeneration. CHEM ENG J. 2023 Jan;452:139165 IHC ;Rat. 10.1016/j.cej.2022.139165
- **[IF=15.304]** Xuan Li. et al. ROS-responsive hydrogel coating modified titanium promotes vascularization and osteointegration of bone defects by orchestrating immunomodulation. BIOMATERIALS. 2022 Aug;287:121683 IHC ;Rat. 35870263
- **[IF=12.822]** Lan Li. et al. Design of a Haversian system-like gradient porous scaffold based on triply periodic minimal surfaces for promoting bone regeneration. J ADV RES. 2023 Jan;: WB ;Mouse. 36632888

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

- **[IF=13.3]** Fangyu Qiao. et al. Dual siRNA-Loaded Cell Membrane Functionalized Matrix Facilitates Bone Regeneration with Angiogenesis and Neurogenesis. SMALL. 2023 Oct;:2307062 IHC ;Rat. 37824284
- **[IF=11.322]** Zhenyin Chen. et al. Gelatin/sodium alginate composite hydrogel with dynamic matrix stiffening ability for bone regeneration. COMPOS PART B-ENG. 2022 Aug;243:110162 IHC ;Rat. 10.1016/j.compositesb.2022.110162

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