

Rabbit Anti-Osteocalcin antibody

SL0470R

Product Name Osteocalcin

Chinese Name 骨钙蛋白/骨钙素抗体

Alias Osteocalcin Propeptide; Gamma-carboxyglutamic acid-containing protein; Bone Gla-protein; BGLAP; Bone gamma carboxyglutamate protein; BGLAP; BGP; Bone gamma carboxyglutamate gla protein osteocalcin; Bone gamma carboxyglutamate protein; Bone Gla protein; Gamma carboxyglutamic acid containing protein; OC; PMF1; OSTCN_HUMAN.

Research Area immunology

Immunogen Species Rabbit

Clonality Polyclonal

React Species Human, Mouse, (predicted: Rat, Dog, Cow, Horse,)

Applications IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight 11kDa

Cellular localization Secretory protein

Form Liquid

Concentration 1mg/ml

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

Lsotype IgG

Purification affinity purified by Protein A

Buffer Solution 1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention This product as supplied is intended for research use only, not for use in human,

therapeutic or diagnostic applications.

PubMed

[PubMed](#)

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.

Function:

Constitutes 1-2% of the total bone protein. It binds strongly to apatite and calcium.

Subcellular Location:

Secreted.

Post-translational modifications:

Gamma-carboxyglutamate residues are formed by vitamin K dependent carboxylation. These residues are essential for the binding of calcium.

Similarity:

Belongs to the osteocalcin/matrix Gla protein family.
Contains 1 Gla (gamma-carboxy-glutamate) domain.

**Product
Detail**

SWISS:

P02818

Gene ID:

632

Database links:

[Entrez Gene: 281646](#) Cow

[Entrez Gene: 632](#) Human

[Entrez Gene: 397530](#) Pig

[Entrez Gene: 25295](#) Rat

[Omim: 112260](#) Human

[SwissProt: P02820](#) Cow

[SwissProt: P02818](#) Human

[SwissProt: Q8HYY9](#) Pig

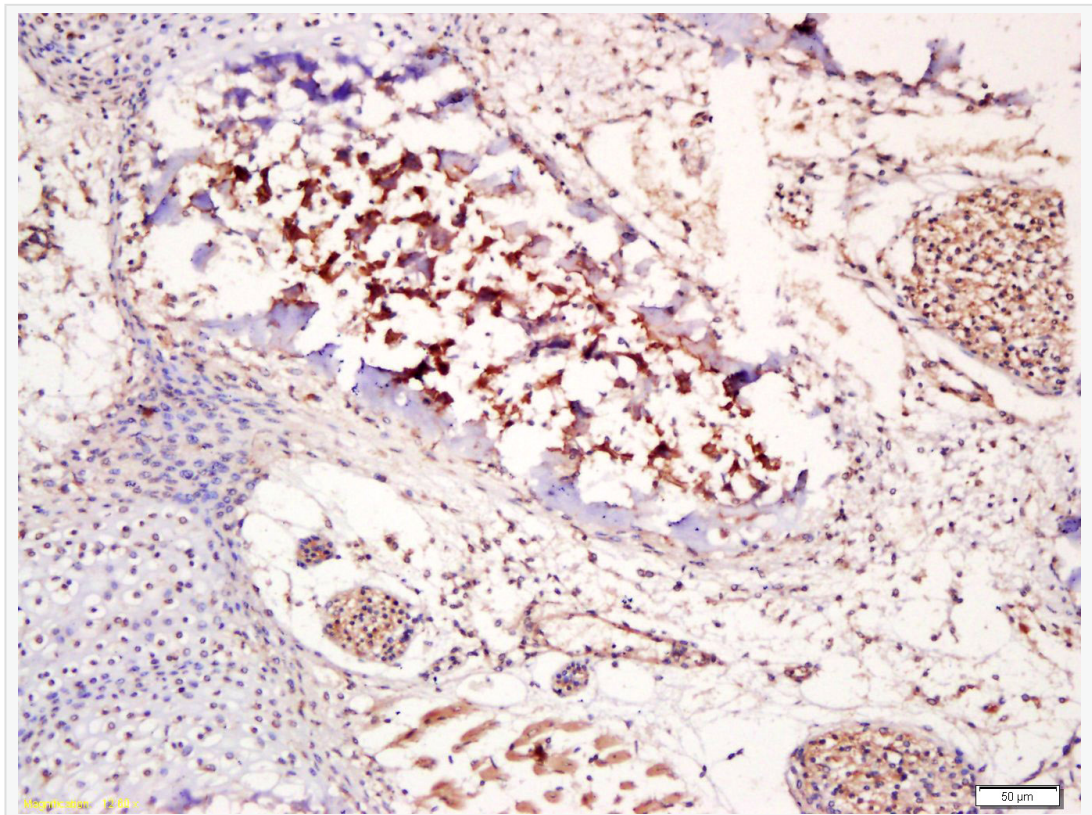
[SwissProt: P04640](#) Rat

[Unigene: 654541](#) Human

[Unigene: 9722](#) Rat

骨钙素又称骨 γ -羧谷氨酸包含蛋白

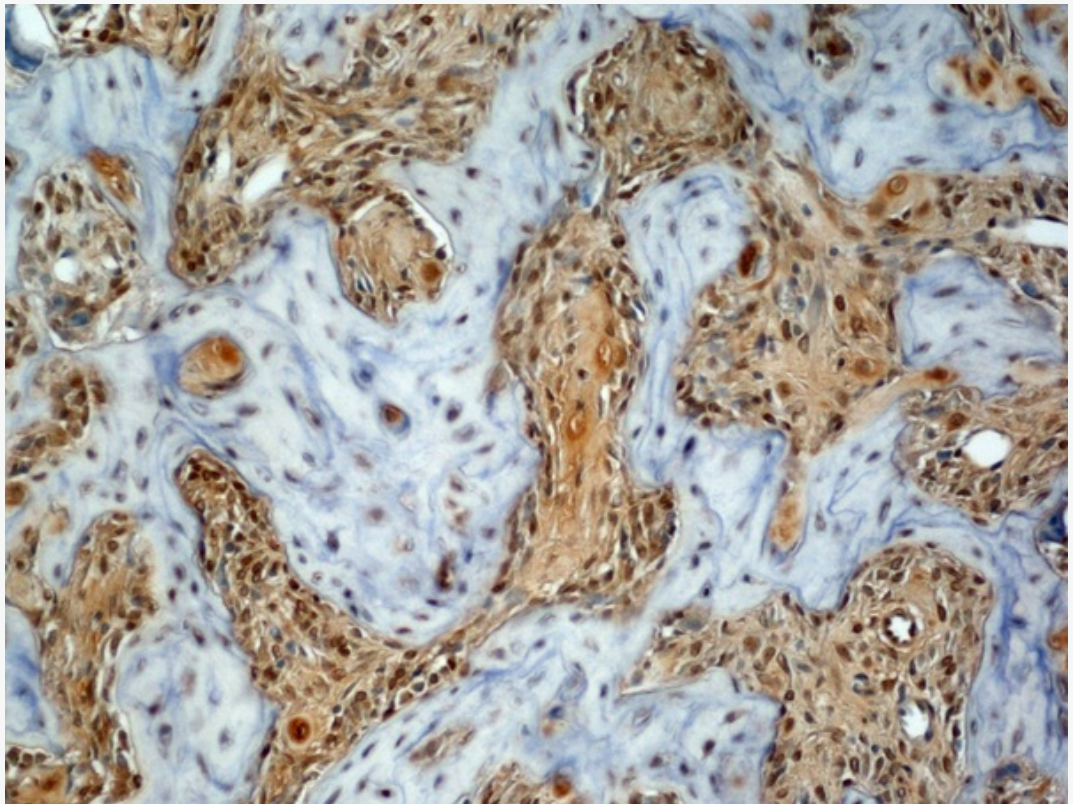
**Product
Picture**



Tissue/cell: bone of mouse embryo; 4% Paraformaldehyde-fixed and paraffin-embedded;

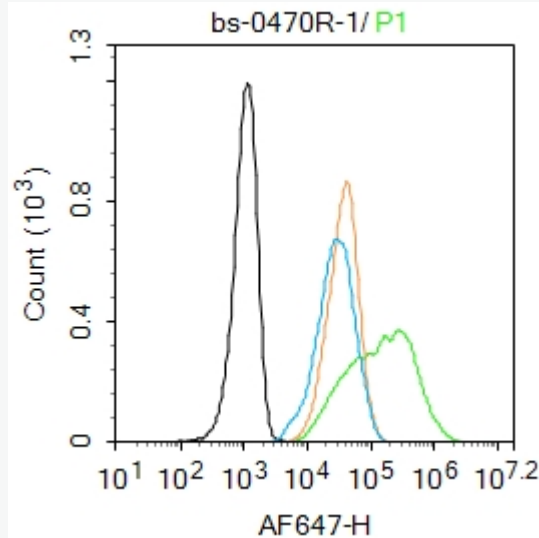
Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-Osteocalcin Polyclonal Antibody, Unconjugated(SL0470R) 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 (SL0470R) at 1:100 followed by conjugation to the secondary antibody and DAB staining



Blank control:Hela.

Primary Antibody (green line): Rabbit Anti-Osteocalcin antibody (SL0470R)

Dilution: 1 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody : Goat anti-rabbit IgG-AF647

Dilution: 1 μ g /test.

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at -20°C. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature.



The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.