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Osteocalcin Rabbit pAb

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Catalog # AP52123

Product Information

Application	WB, IHC-P, IHC-F, IF
Primary Accession	P02818
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	10963
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Osteocalcin
Epitope Specificity	21-100/100
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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.

Additional Information

Gene ID	632
Other Names	Osteocalcin, Bone Gla protein, BGP, Gamma-carboxyglutamic acid-containing protein, BGLAP
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	BGLAP
Function	The carboxylated form is one of the main organic components of the bone matrix, which constitutes 1-2% of the total bone protein (PubMed:3019668, PubMed:6967872). Acts as a negative regulator of bone formation and is required to limit bone formation without impairing bone resorption or mineralization (By similarity). Binds strongly to apatite and calcium upon gamma-carboxylation; this modification is essential for bone metabolism (PubMed:6967872, PubMed:39880952).
Cellular Location	Secreted.

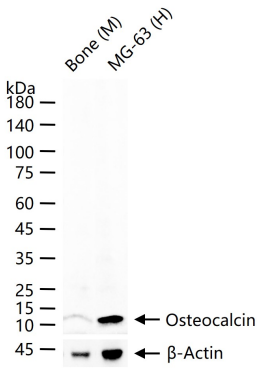
Background

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

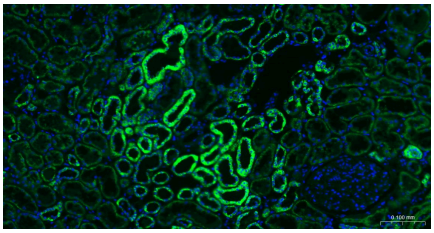
References

Jaenicke T.,et al.Genomics 8:194-206(1990).
Liew C.-C.,et al.Nucleic Acids Res. 18:3647-3651(1990).
Wendel B.,et al.J. Cell. Biochem. 79:566-575(2000).
Smaniotto G.,et al.Submitted (MAY-2008) to the EMBL/GenBank/DDBJ databases.
Mural R.J.,et al.Submitted (SEP-2005) to the EMBL/GenBank/DDBJ databases.

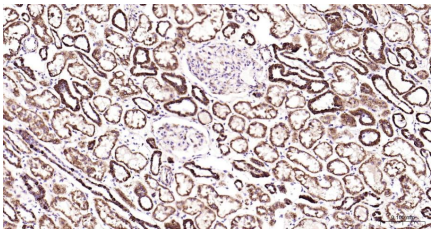
Images



25 ug total protein per lane of various lysates (see on figure) probed with Osteocalcin polyclonal antibody, unconjugated (AP52123) 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 Kidney; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; The section was incubated with Osteocalcin Polyclonal Antibody, Unconjugated (AP52123) at 1:200 overnight at 4°C. Followed by conjugated Goat Anti-Rabbit IgG antibody (green, AP52123-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 (AP52123) at 1:200 overnight at 4°C, followed by conjugation to the AP52123-HRP and DAB (C-0010) staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.