Datasheet for ABIN4886486

anti-Osteocalcin antibody (AA 50-95)

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Overview

Quantity:	100 µg
Target:	Osteocalcin (BGLAP)
Binding Specificity:	AA 50-95
Reactivity:	Mouse
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Osteocalcin antibody is un-conjugated
Application:	Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Purpose:	Rabbit IgG polyclonal antibody for Osteocalcin(BGLAP) detection. Tested with IHC-P in Mouse.
Immunogen:	E. coli-derived mouse Osteocalcin recombinant protein (Position: Y50-I95). Mouse Osteocalcin shares 69% and 68.9% amino acid (aa) sequence identity with human and rat Osteocalcin, respectively.
Isotype:	IgG
Cross-Reactivity (Details):	No cross reactivity with other proteins.
Characteristics:	Rabbit IgG polyclonal antibody for Osteocalcin(BGLAP) detection. Tested with IHC-P in Mouse. Gene Name: bone gamma-carboxyglutamate (gla) protein Protein Name: Osteocalcin
Purification:	Immunogen affinity purified.

Target Details

Target:	Osteocalcin (BGLAP)
Alternative Name:	BGLAP (BGLAP Products)
Background:	Osteocalcin, also known as bone gamma-carboxyglutamic acid-containing protein (BGLAP), is a noncollagenous protein found in bone and dentin. In humans, the osteocalcin is encoded by the BGLAP gene. Its receptor is GPRC6A. It is mapped to 1q22. Osteocalcin may play a role in the body's metabolic regulation and is pro-osteoblastic, or bone-building. It acts as a hormone in the body, causing beta cellsin the pancreas to release more insulin, and at the same time directing fat cells to release the hormone adiponectin, which increases sensitivity to insulin. Also, it may play a role in male fertility. And it is found that picomolar amounts of osteocalcin affected insulin secretion and beta-cell proliferation. Synonyms: BGLAP | Bone Gla protein | ocn | OSTCN HUMAN | Osteocalcin | P86546
Gene ID:	12096
UniProt:	P86546

Application Details

Application Notes:	IHC-P: Concentration: 0.5-1 µg/mL, Tested Species: Mouse, Epitope Retrieval by Heat: Boiling the paraffin sections in 10 mM citrate buffer, pH 6.0, for 20 mins is required for the staining of formalin/paraffin sections. Notes: Tested Species: Species with positive results. Other applications have not been tested. Optimal dilutions should be determined by end users.
Comment:	Antibody can be supported by ABIN921231 in IHC(P).
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Reconstitution:	Add 0.2 mL of distilled water will yield a concentration of 500 µg/mL.
Concentration:	500 µg/mL
Buffer:	Each vial contains 5 mg BSA, 0.9 mg NaCl, 0.2 mg Na2HPO4, 0.05 mg Sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which

Handling

	should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C/-20 °C
Storage Comment:	At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Publications

Product cited in:

Song, Wang, Zeng, Wang: "Synergistic effects of fibroblast growth factor-2 and bone morphogenetic protein-2 on bone induction." in: **Molecular medicine reports**, Vol. 16, Issue 4, pp. 4483-4492, (2018) (PubMed).

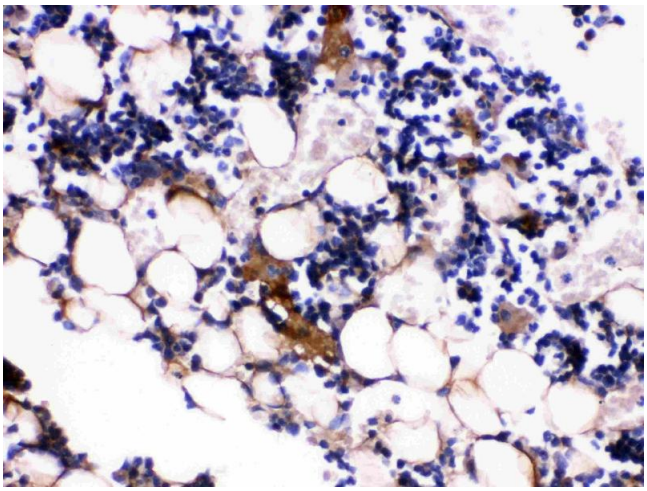
Yang, Baban, Isales, Shi: "Role of glucocorticoid-induced leucine zipper (GILZ) in inflammatory bone loss." in: **PLoS ONE**, Vol. 12, Issue 8, pp. e0181133, (2017) (PubMed).

Che, Guo, Li, Wang, Wei: "Intramuscular injection of bone marrow mononuclear cells contributes to bone repair following midpalatal expansion in rats." in: **Molecular medicine reports**, Vol. 13, Issue 1, pp. 681-8, (2016) (PubMed).

Yin, Cheng, Qin, Yu, Yu, Zhong, Sun, Zhang: "Effects of Naringin on Proliferation and Osteogenic Differentiation of Human Periodontal Ligament Stem Cells In Vitro and In Vivo." in: **Stem cells international**, Vol. 2015, pp. 758706, (2015) (PubMed).

Cheng, Wang, Zhang, Shi: "The osteogenic potential of mesoporous bioglasses/silk and non-mesoporous bioglasses/silk scaffolds in ovariectomized rats: in vitro and in vivo evaluation." in: **PLoS ONE**, Vol. 8, Issue 11, pp. e81014, (2014) (PubMed).

There are more publications referencing this product on: Product page



Immunohistochemistry

Image 1. IHC analysis of Osteocalcin using anti-Osteocalcin antibody . Osteocalcin was detected in paraffin-embedded section of mouse tibia tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/ml rabbit anti-Osteocalcin Antibody overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

