Datasheet for ABIN4886487

anti-Osteocalcin antibody (AA 50-99)

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Overview

Quantity:	100 µg
Target:	Osteocalcin (BGLAP)
Binding Specificity:	AA 50-99
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This Osteocalcin antibody is un-conjugated
Application:	Immunohistochemistry (IHC), Flow Cytometry (FACS)

Product Details

Purpose:	Anti-Osteocalcin/BGLAP Antibody
Immunogen:	E. coli-derived rat Osteocalcin recombinant protein (Position: Y50-V99). Rat Osteocalcin shares 80.9% and 68.9% amino acid (aa) sequence identity with human and mouse Osteocalcin, respectively.
Isotype:	IgG
Cross-Reactivity (Details):	No cross-reactivity with other proteins
Characteristics:	Anti-Osteocalcin/BGLAP Antibody Picoband® (ABIN4886487). Tested in Flow Cytometry, IHC applications. This antibody reacts with Rat.
Purification:	Immunogen affinity purified.

Target Details

Target:	Osteocalcin (BGLAP)
Alternative Name:	Bglap (BGLAP Products)
Background:	Synonyms: Osteocalcin,Bone Gla protein,BGP,Gamma-carboxyglutamic acid-containing protein,Bglap,Bglap2, Tissue Specificity: Bone. 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 ing 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.
Molecular Weight:	29 kDa, 60 kDa
Gene ID:	25295
UniProt:	P04640

Application Details

Application Notes:	Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/mL, Rat Flow Cytometry (Fixed), 1-3 µg/1x10^6 cells, Rat1. Cancela L, Hsieh CL, Francke U, Price PA (September 1990). "Molecular structure, chromosome assignment, and promoter organization of the human matrix Gla protein gene". J. Biol. Chem. 265 (25): 15040-8. 2. Lee NK, Sowa H, Hinoi E, Ferron M, Ahn JD, Confavreux C, Dacquin R, Mee PJ, McKee MD, Jung DY, Zhang Z, Kim JK, Mauvais-Jarvis F, Ducy P, Karsenty G (August 2007). "Endocrine regulation of energy metabolism by the skeleton". Cell 130 (3): 456-69. 3. Puchacz E, Lian JB, Stein GS, Wozney J, Huebner K, Croce C (May 1989). "Chromosomal localization of the human osteocalcin gene". Endocrinology 124 (5): 2648-50.
Comment:	Antibody can be supported by ABIN921231 in IHC(P).
Restrictions:	For Research Use only

Handling

Format:	Lyophilized

Handling

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 should be handled by trained staff only.
Handling Advice:	Avoid repeated freezing and thawing.
Storage:	4 °C,-20 °C
Storage Comment:	Store at -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freeze-thaw cycles.

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).

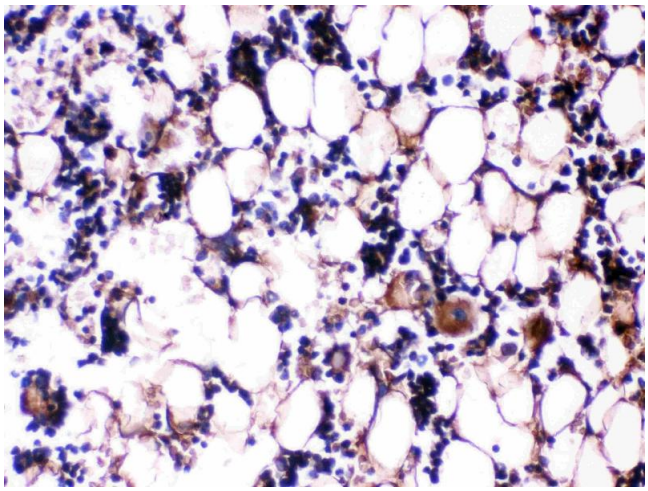
Liu, Ma, Wang, Zhu, Yang, Mei: "Demineralized bone matrix used for direct pulp capping in rats." in: **PLoS ONE**, Vol. 12, Issue 3, pp. e0172693, (2017) (PubMed).

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).

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 rat 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.