

Mouse Anti-Osteocalcin/BGLAP [G5]: MC0182

Intended Use: For Research Use Only

Description: Bone γ -carboxyglutamic acid (Gla) protein, known as BGLAP, BGP or osteocalcin, is an abundant, non-collagenous protein component of bone that is produced by osteoblasts. In mice, osteocalcin is composed of a cluster of 3 genes known as OG1, OG2 and ORG, all of which can be found within a 23 Kb span of genomic DNA. Human osteocalcin is a highly conserved, 46-50 amino acid, single chain protein that contains 3 vitamin K-dependent γ -carboxyglutamic acid residues. Osteocalcin appears transiently in embryonic bone at the time of mineral deposition, where it binds to hydroxyapatite in a calcium-dependent manner. In addition, osteocalcin is one of the most abundant, non-collagenous proteins found in mineralized adult bone. Genetic variation at the osteocalcin locus on chromosome 1q22 impacts postmenopause bone mineral density (BMD) levels and may predispose some women to osteoporosis.

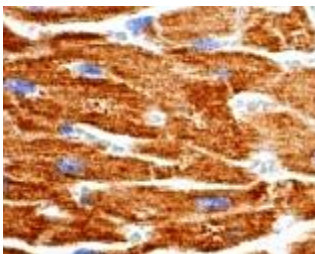
Specifications:

Clone: G5
Source: Mouse
Isotype : IgG3k
Reactivity: Human, mouse, rat
Localization: Cytoplasm
Formulation: Antibody in PBS pH7.4, containing BSA and $\leq 0.09\%$ sodium azide (NaN3)
Storage: Store at 2°- 8°C.
Applications: IHC, ELISA, ICC/IF, IP, WB
Package:

Description	Catalog No.	Size
Osteocalcin/BGLAP Concentrated	MC0182	1 ml

IHC Procedure*:

Positive Control Tissue: Heart muscle, spleen
Concentrated Dilution: 50-250
Pretreatment: Citrate pH6.0 or EDTA pH8.0, 15 minutes using Pressure Cooker, or 30-60 minutes using water bath at 95°-99°C
Incubation Time and Temp: 30-60 minutes @ RT
Detection: Refer to the detection system manual
* Result should be confirmed by an established diagnostic procedure.



FFPE human heart muscle tissue stained with anti-Osteocalcin using DAB

References:

1. Sika Deer Antler Collagen Type I-Accelerated Osteogenesis in Bone Marrow Mesenchymal Stem Cells via the Smad Pathway. Evidence-Based Complementary and Alternative Medicine. Na Li, et al. 13, 2016.
2. Role of bone morphogenetic protein-2 in osteogenic differentiation of mesenchymal stem cells. Sun, J. et al. Molecular medicine reports. 12: 4230-7, 2015.
3. Epigenetic memory gained by priming with osteogenic induction medium improves osteogenesis and other properties of mesenchymal stem cells. Rui, Y. et al. Scientific reports. 5: 110562015.
4. Engineered scaffold-free tendon tissue produced by tendon-derived stem cells. Ni, M. et al. Biomaterials. 34: 2024-37, 2013.