

# osteocalcin (3G8): sc-66158

## BACKGROUND

Bone  $\gamma$ -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 three vitamin K-dependent  $\gamma$ -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 1q impacts postmenopausal bone mineral density (BMD) levels and may predispose some women to osteoporosis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: BGLAP (human) mapping to 1q22.

## SOURCE

osteocalcin (3G8) is a mouse monoclonal antibody raised against a combination of osteocalcin of bovine and human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

osteocalcin (3G8) is recommended for detection of osteocalcin of human and bovine origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for osteocalcin siRNA (h): sc-40790, osteocalcin shRNA Plasmid (h): sc-40790-SH and osteocalcin shRNA (h) Lentiviral Particles: sc-40790-V.

Molecular Weight of osteocalcin: 6 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



See **osteocalcin (G-5): sc-365797** for osteocalcin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.