SANTA CRUZ BIOTECHNOLOGY, INC.

osteocalcin (1C4): sc-66157

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

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 1q impacts postmenopause 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.

RESEARCH USE

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

SOURCE

osteocalcin (1C4) is a mouse monoclonal antibody raised against a combination of osteocalcin of bovine and human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

osteocalcin (1C4) 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

See **osteocalcin (G-5): sc-365797** for osteocalcin antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.