

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Osteocalcin in direct ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 190125
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human Osteocalcin synthetic peptide YLYQWLGAPVPYPDPLEPRREVCELNPDCDELADHIGFQEAYRRFYGPV Accession # P02818
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

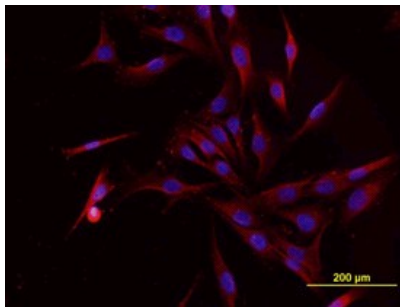
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

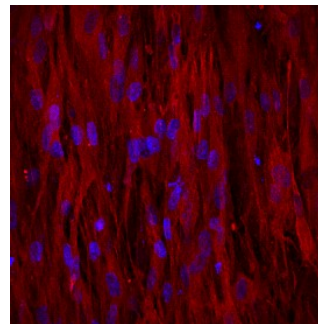
DATA

Immunocytochemistry



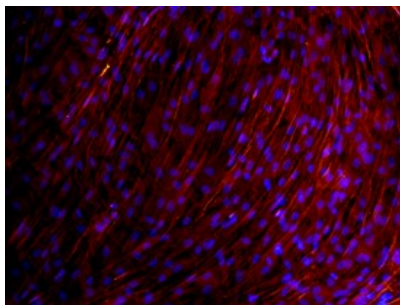
Osteocalcin in MG-63 Human Cell Line. Osteocalcin was detected in immersion fixed MG-63 human osteosarcoma cell line using Human Osteocalcin Monoclonal Antibody (Catalog # MAB1419) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunocytochemistry



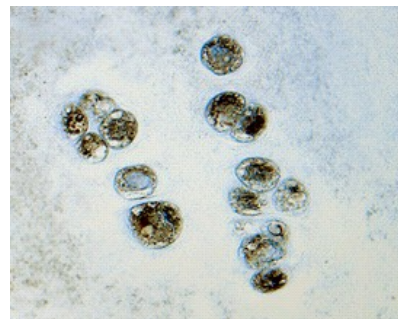
Osteocalcin in Human Osteocytes. Osteocalcin was detected in human mesenchymal stem cells differentiated into osteocytes using Human Osteocalcin Monoclonal Antibody (Catalog # MAB1419) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunocytochemistry



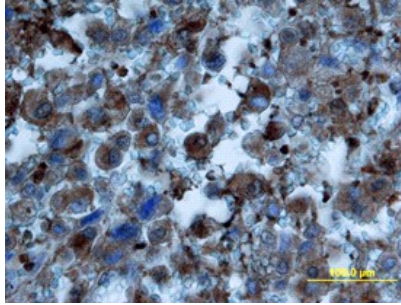
Osteocalcin in Rat Osteocytes. Osteocalcin was detected in immersion fixed rat osteocytes differentiated from mesenchymal stem cells using Human Osteocalcin Monoclonal Antibody (Catalog # MAB1419) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

Immunohistochemistry



Osteocalcin in Human Cartilage. Osteocalcin was detected in immersion fixed paraffin-embedded sections of human cartilage using Human Osteocalcin Monoclonal Antibody (Catalog # MAB1419) at 8 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of chondrocytes. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

Immunohistochemistry



Osteocalcin in Human Osteosarcoma. Osteocalcin was detected in immersion fixed paraffin-embedded sections of human osteosarcoma using Human Osteocalcin Monoclonal Antibody (Catalog # MAB1419) at 25 μg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

Osteocalcin, also named bone gamma-carboxyglutamic acid protein, is a secreted protein whose expression is restricted to cells of the osteoblast lineage (1). It has been frequently used as a marker for osteoblast lineage cells.

References:

1. Lian, J.B. *et al.* (1999) *Vitamin. Horm.* **55**:443.