

UCMA (S-14): sc-163779

BACKGROUND

UCMA (Unique cartilage matrix-associated protein) is a 138 amino acid secreted protein that is highly expressed in resting chondrocytes in developing long bones and is thought to function in the early phase of chondrocyte differentiation. A furin-like protease processes UCMA into an N-terminal 37 amino acid peptide and a C-terminal 74 amino acid peptide, which is referred to as Unique cartilage matrix-associated protein C-terminal fragment (Ucma-C). Introduction of recombinant Ucma-C interferes with osteogenic differentiation of mesenchymal stem cells, MC3T3-E1 preosteoblasts and primary osteoblasts. This suggests that Ucma may be involved in the negative regulation of osteogenic differentiation of osteochondrogenic precursor cells at the cartilage-bone interface and in peripheral zones of fetal cartilage.

REFERENCES

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- Mackie, E.J., et al. 2008. Endochondral ossification: how cartilage is converted into bone in the developing skeleton. *Int. J. Biochem. Cell Biol.* 40: 46-62.
- Surmann-Schmitt, C., et al. 2008. Ucma, a novel secreted cartilage-specific protein with implications in osteogenesis. *J. Biol. Chem.* 283: 7082-7093.
- Tagariello, A., et al. 2008. Ucma—A novel secreted factor represents a highly specific marker for distal chondrocytes. *Matrix Biol.* 27: 3-11.
- Le Jeune, M., et al. 2010. Identification of four alternatively spliced transcripts of the Ucma/GRP gene, encoding a new Gla-containing protein. *Exp. Cell Res.* 316: 203-215.

CHROMOSOMAL LOCATION

Genetic locus: UCMA (human) mapping to 10p13; Ucma (mouse) mapping to 2 A1.

SOURCE

UCMA (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of UCMA of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163779 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

UCMA (S-14) is recommended for detection of UCMA of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other C10orf family members.

Suitable for use as control antibody for UCMA siRNA (h): sc-90398, UCMA siRNA (m): sc-154887, UCMA shRNA Plasmid (h): sc-90398-SH, UCMA shRNA Plasmid (m): sc-154887-SH, UCMA shRNA (h) Lentiviral Particles: sc-90398-V and UCMA shRNA (m) Lentiviral Particles: sc-154887-V.

Molecular Weight of UCMA: 17 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **UCMA (H-2): sc-515468**, our highly recommended monoclonal alternative to UCMA (S-14).