SANTA CRUZ BIOTECHNOLOGY, INC.

# CRTAP (h): 293T Lysate: sc-159963

## BACKGROUND

CRTAP (cartilage associated protein), also known as CASP or LEPREL3 (leprecan-like 3), is a secreted protein localizing to the extracellular space that plays a role in collagen post-translational modifications, extracellular fibril assembly and intracellular trafficking. CRTAP is widely expressed with predominant expression in articular chondrocytes. It contains a signal peptide and a tetratricopeptide-like helical domain and is essential for normal bone formation. In the endoplasmic reticulum (ER), CRTAP forms a complex with Gros1 and CyPB (cyclophilin B) and is required for the efficient 3-hydroxylation of target prolyl residues in Collagen Type I molecules, the major structural proteins of skin and bone. Mutations in the gene encoding CRTAP can lead to autosomal recessive osteogenesis imperfecta (OI) type 7 and type 2B. OI, also known as brittle bone disease, is characterized by bone fragility and susceptibility to fractures. OI type 7 is a mild form of this disorder, while OI type 2B is a neonatal lethal condition.

## REFERENCES


1. Castagnola, P., et al. 1997. Cartilage associated protein (CASP) is a novel developmentally regulated chick embryo protein. J. Cell Sci. 110: 1351-1359.
2. Morello, R., et al. 1999. cDNA cloning, characterization and chromosome mapping of CRTAP encoding the mouse cartilage associated protein. Matrix Biol. 18: 319-324.
3. Tonachini, L., et al. 1999. cDNA cloning, characterization and chromosome mapping of the gene encoding human cartilage associated protein (CRTAP). Cytogenet. Cell Genet. 87: 191-194.
4. Barnes, A.M., et al. 2006. Deficiency of cartilage-associated protein in recessive lethal osteogenesis imperfecta. N. Engl. J. Med. 355: 2757-2764.
5. Morello, R., et al. 2006. CRTAP is required for prolyl 3-hydroxylation and mutations cause recessive osteogenesis imperfecta. Cell 127: 291-304.
6. Martin, E. and Shapiro, J.R. 2007. Osteogenesis imperfecta: epidemiology and pathophysiology. Curr. Osteoporos. Rep. 5: 91-97.
7. Kwan, T., et al. 2007. Heritability of alternative splicing in the human genome. Genome Res. 17: 1210-1218.


## CHROMOSOMAL LOCATION

Genetic locus: CRTAP (human) mapping to 3p22.3.

## PRODUCT

CRTAP (h): 293T Lysate represents a lysate of human CRTAP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

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

## APPLICATIONS

CRTAP (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive CRTAP antibodies. Recommended use: 10-20 µl per lane.

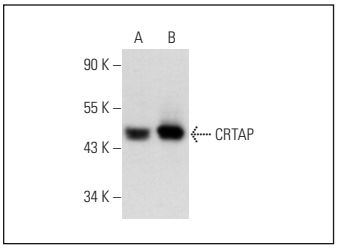
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

CRTAP (L-24): sc-100920 is recommended as a positive control antibody for Western Blot analysis of enhanced human CRTAP expression in CRTAP transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA




CRTAP (L-24): sc-100920. Western blot analysis of CRTAP expression in non-transfected: sc-117752 (**A**) and human CRTAP transfected: sc-159963 (**B**) 293T whole cell lysates.

## RESEARCH USE

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