

# CEMP1 (T-15): sc-164032

## BACKGROUND

A mineralized connective tissue known as cementum covers the root surfaces of teeth and is required for maturation of periodontal tissue. CEMP1 (cementum protein 1), also designated CP23 or cementoblastoma-derived protein 1, is a 247 amino acid nuclear and cytoplasmic protein that is thought to regulate cementoblast behavior. Expressed specifically in periodontal ligament and cementum, CEMP1 may play a role in differentiation and mineralization of non-osteogenic cells. The gene encoding CEMP1 maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

## REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. *Proc. Natl. Acad. Sci. USA* 100: 5956-5961.
3. Alvarez-Perez, M.A., et al. 2006. Molecular cloning, expression and immunolocalization of a novel human cementum-derived protein (CP-23). *Bone* 38: 409-419.
4. Carmona-Rodríguez, B., et al. 2007. Human Cementum Protein 1 induces expression of bone and cementum proteins by human gingival fibroblasts. *Biochem. Biophys. Res. Commun.* 358: 763-769.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611113. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.
7. Villarreal-Ramírez, E., et al. 2009. Characterization of recombinant human cementum protein 1 (hrCEMP1): primary role in biomineralization. *Biochem. Biophys. Res. Commun.* 384: 49-54.

## CHROMOSOMAL LOCATION

Genetic locus: CEMP1 (human) mapping to 16p13.3.

## SOURCE

CEMP1 (T-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CEMP1 of human origin.

## STORAGE

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

## 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-164032 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

CEMP1 (T-15) is recommended for detection of CEMP1 of 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).

Suitable for use as control antibody for CEMP1 siRNA (h): sc-106733, CEMP1 shRNA Plasmid (h): sc-106733-SH and CEMP1 shRNA (h) Lentiviral Particles: sc-106733-V.

Molecular Weight of CEMP1: 26 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](http://www.scbt.com) or our catalog for detailed protocols and support products.