SANTA CRUZ BIOTECHNOLOGY, INC.

CLPTM1 (C-2): sc-398443

BACKGROUND

Clefts of the oral-facial region usually occur in early fetal development and can affect the lip, the soft palate (the soft tissue in the back of the mouth) and the hard palate (the roof of the mouth). Cleft lip (with or without cleft palate) is a genetically complex birth defect that occurs in approximately one in every 750-1,000 live births. This is one of the most common birth defects and is multifactorial, with both genetic and environmental causes. Cleft lip- and palate-associated transmembrane protein 1 (CLPTM1) belongs to a family of cleft lip and palate transmembrane proteins. This family also contains cisplatin resistance-related protein (CRR9), which is involved in CDDP-induced apoptosis. The CLPTM1 protein shows strong homology to two *Caenorhabditis elegans* genes.

REFERENCES

1. Juriloff, D.M. and Mah, D.G. 1995. The major locus for multifactorial non-syndromic cleft lip maps to mouse chromosome 11. Mamm. Genome 6: 63-69.
2. Yoshiura, K., et al. 1998. Characterization of a novel gene disrupted by a balanced chromosomal translocation t(2;19)(q11.2;q13.3) in a family with cleft lip and palate. Genomics 54: 231-240.
3. Yamamoto, K., et al. 2001. A novel gene, CRR9, which was upregulated in CDDP-resistant ovarian tumor cell line, was associated with apoptosis. Biochem. Biophys. Res. Commun. 280: 1148-1154.
4. Murray, J.C. 2002. Gene/environment causes of cleft lip and/or palate. Clin. Genet. 61: 248-256.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604783. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Rossi, M.R., et al. 2005. Identification of inactivating mutations in the JAK1, SYNJ2 and CLPTM1 genes in prostate cancer cells using inhibition of nonsense-mediated decay and microarray analysis. Cancer Genet. Cytogenet. 161: 97-103.
7. Turhani, D., et al. 2005. Mutation analysis of CLPTM1 and PVRL1 genes in patients with non-syndromic clefts of lip, alveolus and palate. J. Craniomaxillofac. Surg. 33: 301-306.
8. Warrington, A., et al. 2006. Genetic evidence for the role of loci at 19q13 in cleft lip and palate. J. Med. Genet. 43: e26.

CHROMOSOMAL LOCATION

Genetic locus: CLPTM1 (human) mapping to 19q13.32.

SOURCE

CLPTM1 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 579-608 near the C-terminus of CLPTM1 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-398443 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CLPTM1 (C-2) is recommended for detection of CLPTM1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 CLPTM1 siRNA (h): sc-60415, CLPTM1 shRNA Plasmid (h): sc-60415-SH and CLPTM1 shRNA (h) Lentiviral Particles: sc-60415-V.

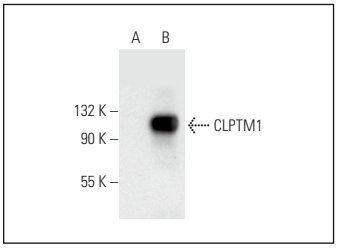
Molecular Weight of CLPTM1: 76 kDa.

Positive Controls: CLPTM1 (h): 293T Lysate: sc-171512.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CLPTM1 (C-2): sc-398443. Western blot analysis of CLPTM1 expression in non-transfected: sc-117752 (**A**) and human CLPTM1 transfected: sc-171512 (**B**) 293T whole cell lysates.

RESEARCH USE

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