SANTA CRUZ BIOTECHNOLOGY, INC.

C12orf29 (A-7): sc-390845

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Encoding over 1,100 genes within 132 million bases, chromosome 12 makes up about 4.5% of the human genome. A number of skeletal deformities are linked to chromosome 12 including hypochondrogenesis, achondrogenesis and Kniest dysplasia. Noonan syndrome, which includes heart and facial developmental defects among the primary symptoms, is caused by a mutant form of PTPN11 gene product, SH-PTP2. Chromosome 12 is also home to a homeobox gene cluster which encodes crucial transcription factors for morphogenesis, and the natural killer complex gene cluster encoding C-type lectin proteins which mediate the NK cell response to MHC I interaction. Trisomy 12p leads to facial development defects, seizure disorders and a host of other symptoms varying in severity depending on the extent of mosaicism and is most severe in cases of complete trisomy. The C12orf29 gene product has been provisionally designated C12orf29 pending further characterization.

REFERENCES

1. Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. Am. J. Med. Genet. 63: 250-256.
2. Yang, W. and Cole, W.G. 1998. Low basal transcripts of the COL2A1 collagen gene from lymphoblasts show alternative splicing of exon 12 in the Kniest form of spondyloepiphyseal dysplasia. Hum. Mutat. Suppl. 1: S1-S2.
3. Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. Immunol. Rev. 181: 20-38.
4. Zumkeller, W., et al. 2004. Genotype/phenotype analysis in a patient with pure and complete trisomy 12p. Am. J. Med. Genet. A 129A: 261-264.
5. Kelley, J., et al. 2005. Comparative genomics of natural killer cell receptor gene clusters. PLoS Genet. 1: 129-139.
6. Nishimura, G., et al. 2005. The phenotypic spectrum of COL2A1 mutations. Hum. Mutat. 26: 36-43.
7. Segel, R., et al. 2006. The natural history of trisomy 12p. Am. J. Med. Genet. A 140: 695-703.

CHROMOSOMAL LOCATION

Genetic locus: C12orf29 (human) mapping to 12q21.32; 4930430F08Rik (mouse) mapping to 10 D1.

SOURCE

C12orf29 (A-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 63-82 within an internal region of C12orf29 of human origin.

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-390845 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

C12orf29 (A-7) is recommended for detection of C12orf29 of human origin, 4930430F08Rik of mouse origin and RGD1307947 of rat 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 C12orf29 siRNA (h): sc-96243, 4930430F08Rik siRNA (m): sc-140053, C12orf29 shRNA Plasmid (h): sc-96243-SH, 4930430F08Rik shRNA Plasmid (m): sc-140053-SH, C12orf29 shRNA (h) Lentiviral Particles: sc-96243-V and 4930430F08Rik shRNA (m) Lentiviral Particles: sc-140053-V.

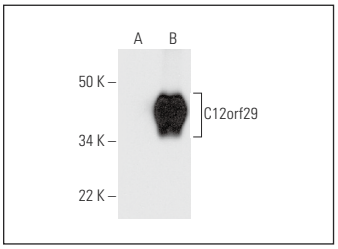
Molecular Weight of C12orf29 isoforms: 37/35/4 kDa.

Positive Controls: C12orf29 (h): 293T Lysate: sc-111519 or HL-60 whole cell lysate: sc-2209.

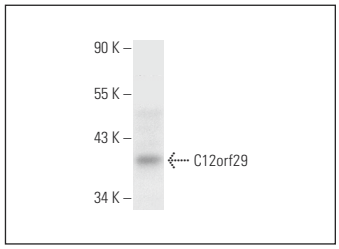
RECOMMENDED SUPPORT REAGENTS

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



C12orf29 (A-7): sc-390845. Western blot analysis of C12orf29 expression in non-transfected: sc-117752 (**A**) and human C12orf29 transfected: sc-111519 (**B**) 293T whole cell lysates.



C12orf29 (A-7): sc-390845. Western blot analysis of C12orf29 expression in HL-60 whole cell lysate.

STORAGE

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

RESEARCH USE

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