SANTA CRUZ BIOTECHNOLOGY, INC.

TBRG4 (H-262): sc-135421

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The Power to Question

BACKGROUND

TBRG4 (transforming growth factor b regulator 4), also known as CPR2 (cell cycle progression restoration protein 2) or FASTKD4 (FAST kinase domain-containing protein 4), is a 631 amino acid protein that contains one RAP domain and belongs to the FAST kinase family. TBRG4 is ubiquitously expressed and may have a role in cell cycle progression. Existing as two alternatively spliced isoforms, the gene encoding TBRG4 maps to human chromosome 7p13. Chromosome 7 is approximately 158 million bases long, encodes over 1000 genes and makes up about 5% of the human genome. Chromosome 7 has been linked to osteogenesis imperfecta, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome. The deletion of a portion of the q arm of chromosome 7 is associated with Williams-Beuren syndrome, a condition characterized by mild mental retardation, an unusual comfort and friendliness with strangers and an elfin appearance. Deletions of portions of the q arm of chromosome 7 are also seen in a number of myeloid disorders including cases of acute myelogenous leukemia and myelodysplasia.

REFERENCES

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2. Liang, H., et al. 1998. Molecular anatomy of chromosome 7q deletions in myeloid neoplasms: evidence for multiple critical loci. Proc. Natl. Acad. Sci. USA 95: 3781-3785.
3. Hillier, L.W., et al. 2003. The DNA sequence of human chromosome 7. Nature 424: 157-164.
4. Eckert, M.A., et al. 2006. The neurobiology of Williams syndrome: cascading influences of visual system impairment? Cell. Mol. Life Sci. 63: 1867-1875.
5. Aglipay, J.A., et al. 2006. ATM activation by ionizing radiation requires BRCA1-associated BAAT1. J. Biol. Chem. 281: 9710-9718.
6. Osborne, L.R., et al. 2006. Williams-Beuren syndrome diagnosis using fluorescence *in situ* hybridization. Methods Mol. Med. 126: 113-128.
7. Reiner, O., et al. 2006. Lissencephaly 1 linking to multiple diseases: mental retardation, neurodegeneration, schizophrenia, male sterility, and more. Neuromolecular Med. 8: 547-565.

CHROMOSOMAL LOCATION

Genetic locus: TBRG4 (human) mapping to 7p13; Tbrg4 (mouse) mapping to 11 A1.

SOURCE

TBRG4 (H-262) is a rabbit polyclonal antibody raised against amino acids 370-631 mapping at the C-terminus of TBRG4 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.

APPLICATIONS

TBRG4 (H-262) is recommended for detection of TBRG4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 TBRG4 siRNA (h): sc-89508, TBRG4 siRNA (m): sc-154125, TBRG4 shRNA Plasmid (h): sc-89508-SH, TBRG4 shRNA Plasmid (m): sc-154125-SH, TBRG4 shRNA (h) Lentiviral Particles: sc-89508-V and TBRG4 shRNA (m) Lentiviral Particles: sc-154125-V.

Molecular Weight of TBRG4 isoform 1: 71 kDa.

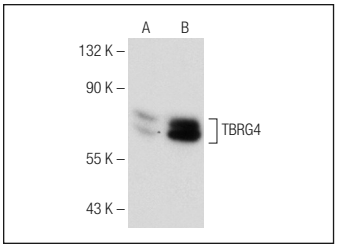
Molecular Weight of TBRG4 isoform 2: 58 kDa.

Positive Controls: TBRG4 (m): 293T Lysate: sc-126081, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

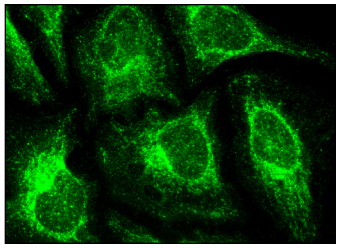
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



TBRG4 (H-262): sc-135421. Western blot analysis of TBRG4 expression in non-transfected: sc-117752 (**A**) and mouse TBRG4 transfected: sc-126081 (**B**) 293T whole cell lysates.



TBRG4 (H-262): sc-135421. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

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.