

# TBRG4 (F-1): sc-373948



The Power to Question

## BACKGROUND

TBRG4 (transforming growth factor  $\beta$  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 1,000 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

1. Tsipouras, P., et al. 1983. Restriction fragment length polymorphism associated with the pro  $\alpha$  2(I) gene of human type I procollagen. Application to a family with an autosomal dominant form of osteogenesis imperfecta. *J. Clin. Invest.* 72: 1262-1267.
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.

## CHROMOSOMAL LOCATION

Genetic locus: TBRG4 (human) mapping to 7p13.

## SOURCE

TBRG4 (F-1) is a mouse monoclonal antibody raised against amino acids 370-631 mapping at the C-terminus of TBRG4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TBRG4 (F-1) is available conjugated to agarose (sc-373948 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373948 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373948 PE), fluorescein (sc-373948 FITC), Alexa Fluor<sup>®</sup> 488 (sc-373948 AF488), Alexa Fluor<sup>®</sup> 546 (sc-373948 AF546), Alexa Fluor<sup>®</sup> 594 (sc-373948 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-373948 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-373948 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-373948 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

TBRG4 (F-1) is recommended for detection of TBRG4 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 shRNA Plasmid (h): sc-89508-SH and TBRG4 shRNA (h) Lentiviral Particles: sc-89508-V.

Molecular Weight of TBRG4 isoform 1: 71 kDa.

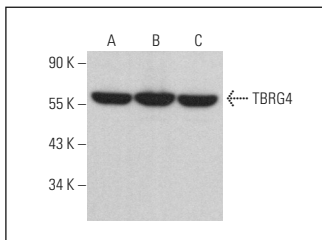
Molecular Weight of TBRG4 isoform 2: 58 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SK-BR-3 cell lysate: sc-2218 or K-562 whole cell lysate: sc-2203.

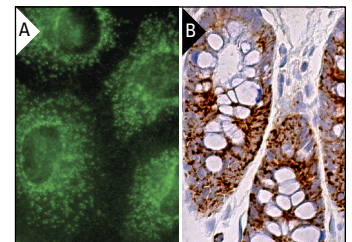
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



TBRG4 (F-1): sc-373948. Western blot analysis of TBRG4 expression in HeLa (A), SK-BR-3 (B) and K-562 (C) whole cell lysates.



TBRG4 (F-1): sc-373948. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

## 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.