

FYB2 (G-2): sc-514947

BACKGROUND

Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. A breakpoint has been identified in 1q which disrupts the DISC1 gene and is linked to schizophrenia. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. *J. Exp. Med.* 172: 263-272.
2. Blackwood, D.H., et al. 2001. Schizophrenia and affective disorders— cosegregation with a translocation at chromosome 1q42 that directly disrupts brain-expressed genes: clinical and P300 findings in a family. *Am. J. Hum. Genet.* 69: 428-433.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
4. Lans, H. and Hoeijmakers, J.H. 2006. Cell biology: aging nucleus gets out of shape. *Nature* 440: 32-34.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. *Nature* 441: 315-321.

CHROMOSOMAL LOCATION

Genetic locus: FYB2 (human) mapping to 1p32.2; Fyb2 (mouse) mapping to 4 C6.

SOURCE

FYB2 (G-2) is a mouse monoclonal antibody raised against amino acids 281-506 mapping within an internal region of FYB2 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.

FYB2 (G-2) is available conjugated to agarose (sc-514947 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514947 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514947 PE), fluorescein (sc-514947 FITC), Alexa Fluor® 488 (sc-514947 AF488), Alexa Fluor® 546 (sc-514947 AF546), Alexa Fluor® 594 (sc-514947 AF594) or Alexa Fluor® 647 (sc-514947 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514947 AF680) or Alexa Fluor® 790 (sc-514947 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FYB2 (G-2) is recommended for detection of FYB2 of mouse, rat and 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 FYB2 siRNA (h): sc-88643, FYB2 siRNA (m): sc-108387, FYB2 shRNA Plasmid (h): sc-88643-SH, FYB2 shRNA Plasmid (m): sc-108387-SH, FYB2 shRNA (h) Lentiviral Particles: sc-88643-V and FYB2 shRNA (m) Lentiviral Particles: sc-108387-V.

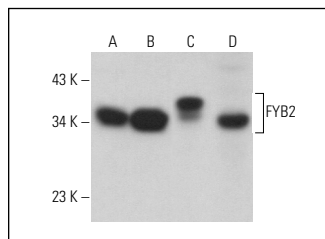
Molecular Weight of FYB2 isoform 1/2: 82/39 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MDA-MB-231 cell lysate: sc-2232 or Hep G2 cell lysate: sc-2227.

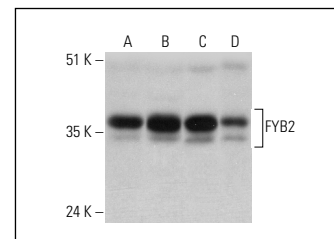
RECOMMENDED SUPPORT REAGENTS

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



FYB2 (G-2): sc-514947. Western blot analysis of FYB2 expression in Hep G2 (A), T-47D (B) and Neuro-2A (C) whole cell lysates and rat liver tissue extract (D).



FYB2 (G-2): sc-514947. Western blot analysis of FYB2 expression in HeLa (A), MDA-MB-231 (B) and Hep G2 (C) whole cell lysates and human salivary gland tissue extract (D).

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.

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