

TMEM116 (B-3): sc-515375

BACKGROUND

TMEM116 is a 228 amino acid encoded by a gene that maps to human chromosome 12. 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.

REFERENCES

- Allen, T.L., et al. 1996. Cytogenetic and molecular analysis in trisomy 12p. *Am. J. Med. Genet.* 63: 250-256.
- 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.* 1: S1-S2.
- Trowsdale, J., et al. 2001. The genomic context of natural killer receptor extended gene families. *Immunol. Rev.* 181: 20-38.
- 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.

CHROMOSOMAL LOCATION

Genetic locus: TMEM116 (human) mapping to 12q24.13; Tmem116 (mouse) mapping to 5 F.

SOURCE

TMEM116 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 199-221 near the C-terminus of TMEM116 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

TMEM116 (B-3) is available conjugated to agarose (sc-515375 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515375 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515375 PE), fluorescein (sc-515375 FITC), Alexa Fluor® 488 (sc-515375 AF488), Alexa Fluor® 546 (sc-515375 AF546), Alexa Fluor® 594 (sc-515375 AF594) or Alexa Fluor® 647 (sc-515375 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515375 AF680) or Alexa Fluor® 790 (sc-515375 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515375 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TMEM116 (B-3) is recommended for detection of TMEM116 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 TMEM116 siRNA (h): sc-95689, TMEM116 siRNA (m): sc-154351, TMEM116 shRNA Plasmid (h): sc-95689-SH, TMEM116 shRNA Plasmid (m): sc-154351-SH, TMEM116 shRNA (h) Lentiviral Particles: sc-95689-V and TMEM116 shRNA (m) Lentiviral Particles: sc-154351-V.

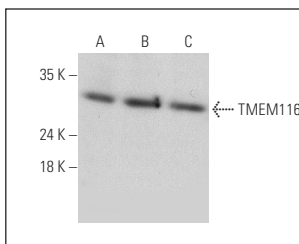
Molecular Weight of TMEM116: 27 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, K-562 whole cell lysate: sc-2203 or RT-4 whole cell lysate: sc-364257.

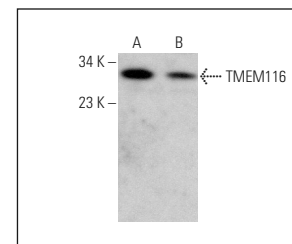
RECOMMENDED SUPPORT REAGENTS

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



TMEM116 (B-3): sc-515375. Western blot analysis of TMEM116 expression in MCF7 (A), K-562 (B) and RT-4 (C) whole cell lysates.



TMEM116 (B-3): sc-515375. Western blot analysis of TMEM116 expression in NIH/3T3 (A) and TK-1 (B) whole cell lysates.

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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