

# Tim17B (M-14): sc-138811

## BACKGROUND

Tim17B, also known as Timm17b (mitochondrial import inner membrane translocase subunit Tim17B), is a 172 amino acid multi-pass membrane protein that belongs to the Tim17/Tim22/Tim23 family. Tim17B is an essential component of the Tim23 complex, a complex that mediates the translocation of transit peptide-containing proteins across the mitochondrial inner membrane. The complex is composed of at least Tim23, Tim17 (Tim17A or Tim17B) and Tim50, and it interacts with the Tim44 component of the PAM complex. Tim17B expression is abundant in heart and skeletal muscle, intermediate in brain, and weak in pancreas, placenta, kidney and liver. The gene that encodes Tim17B maps to human chromosome Xp11.23. Human chromosome X consists of about 153 million base pairs and nearly 1,000 genes. Color blindness, hemophilia and Duchenne muscular dystrophy are well known X chromosome-linked conditions which affect males more frequently, as males carry a single X chromosome.

## REFERENCES

1. Bauer, M.F., et al. 1999. Genetic and structural characterization of the human mitochondrial inner membrane translocase. *J. Mol. Biol.* 289: 69-82.
2. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 300249. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Gianfrancesco, F., et al. 2001. Differential divergence of three human pseudoautosomal genes and their mouse homologs: implications for sex chromosome evolution. *Genome Res.* 11: 2095-2100.
4. Bernardino-Sgherri, J., et al. 2002. Overall DNA methylation and chromatin structure of normal and abnormal X chromosomes. *Cytogenet. Genome Res.* 99: 85-91.
5. Deeb, S.S. 2005. The molecular basis of variation in human color vision. *Clin. Genet.* 67: 369-377.
6. Helderman-van den Enden, A.T., et al. 2009. Recurrence risk due to germ line mosaicism: Duchenne and Becker muscular dystrophy. *Clin. Genet.* 75: 465-472.
7. Kasper, C.K., et al. 2009. Mosaicism and haemophilia. *Haemophilia*. E-published.

## CHROMOSOMAL LOCATION

Genetic locus: Timm17b (mouse) mapping to X A1.1.

## SOURCE

Tim17B (M-14) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of Tim17B of mouse origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-138811 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Tim17B (M-14) is recommended for detection of Tim17B of mouse and rat origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Tim17B (M-14) is also recommended for detection of Tim17B in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Tim17B siRNA (h): sc-106613, Tim17B siRNA (m): sc-154272, Tim17B shRNA Plasmid (h): sc-106613-SH, Tim17B shRNA Plasmid (m): sc-154272-SH, Tim17B shRNA (h) Lentiviral Particles: sc-106613-V and Tim17B shRNA (m) Lentiviral Particles: sc-154272-V.

Molecular Weight of Tim17B: 17 kDa.

## 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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.