

Tim9B (C-20): sc-17063

BACKGROUND

The majority of mitochondrial-directed proteins are encoded by the nuclear genome and are transported to the mitochondria via regulated processes involving the mitochondrial Tom and Tim proteins. The mitochondrial Tim protein family is comprised of a large group of evolutionarily conserved proteins that are found in most eukaryotes. Import of nuclear-encoded precursor proteins into and across the mitochondrial inner membrane is mediated by two distinct complexes, the Tim23 complex and the Tim22 complex, which differ in their substrate specificity. Defects in Tim proteins are implicated in several neuro-degenerative diseases, suggesting important roles for Tim proteins in development and health. Tim9A, which maps to human chromosome 14q21, is localized to the intermembrane space of mitochondria and forms heteromeric complexes with Tim10 and Tim12. One complex contains Tim9 and Tim10, whereas the other complex contains Tim9, Tim10 and Tim12 and associates with Tim22. Tim9B (also designated Fracture Callus 1), which maps to human chromosome 11p15.4, has a molecular mass of 9kDa and is expressed in post-fracture calluses from days 5-10.

REFERENCES

1. Hadjiargyrou, M., et al. 1998. Cloning of a novel cDNA expressed during the early stages of fracture healing. *Biochem. Biophys. Res. Commun.* 249: 879-884.
2. Jin, H., et al. 1999. The human family of Deafness/Dystonia peptide (DDP) related mitochondrial import proteins. *Genomics* 61: 259-267.
3. Bauer, M.F., et al. 1999. The mitochondrial TIM22 preprotein translocase is highly conserved throughout the eukaryotic kingdom. *FEBS Lett.* 464: 41-47.
4. Rassow, J., et al. 1999. The preprotein translocase of the mitochondrial inner membrane: function and evolution. *J. Mol. Biol.* 286: 105-120.
5. Adam, A., et al. 1999. Tim9, a new component of the TIM22.54 translocase in mitochondria. *EMBO J.* 18: 313-319.

CHROMOSOMAL LOCATION

Genetic locus: FXC1 (human) mapping to 11p15.4; Fxc1 (mouse) mapping to 7 E3.

SOURCE

Tim9B (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Tim9B 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.

Blocking peptide available for competition studies, sc-17063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Tim9B (C-20) is recommended for detection of Tim9B 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).

Tim9B (C-20) is also recommended for detection of Tim9B in additional species, including equine, canine and porcine.

Suitable for use as control antibody for Tim9B siRNA (h): sc-41253, Tim9B siRNA (m): sc-41254, Tim9B shRNA Plasmid (h): sc-41253-SH, Tim9B shRNA Plasmid (m): sc-41254-SH, Tim9B shRNA (h) Lentiviral Particles: sc-41253-V and Tim9B shRNA (m) Lentiviral Particles: sc-41254-V.

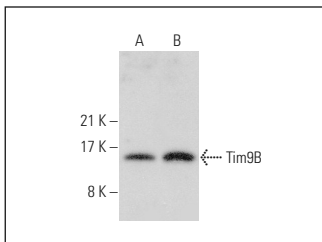
Molecular Weight of Tim9B: 12 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HEK293 whole cell lysate: sc-45136 or HeLa whole cell lysate: sc-2200.

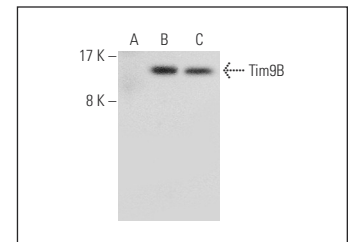
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Tim9B (C-20): sc-17063. Western blot analysis of Tim9B expression in Caki-1 (A) and HeLa (B) whole cell lysates.



Tim9B (C-20): sc-17063. Western blot analysis of Tim9B expression in HEK293 (A), Hep G2 (B) and K-562 (C) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.