

Tim9A (N-13): sc-17058

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) 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.
6. Bauer, M.F. and Neupert, W. 2001. Import of proteins into mitochondria: a novel pathomechanism for progressive neurodegeneration. *J. Inher. Metab. Dis.* 24: 166-180.

CHROMOSOMAL LOCATION

Genetic locus: TIMM9 (human) mapping to 14q23.1; Timm9 (mouse) mapping to 12 C3.

SOURCE

Tim9A (N-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Tim9A of human origin.

STORAGE

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

PROTOCOLS

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

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-17058 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tim9A (N-13) is recommended for detection of Tim9A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 Tim9A siRNA (h): sc-41251, Tim9A siRNA (m): sc-41252, Tim9A shRNA Plasmid (h): sc-41251-SH, Tim9A shRNA Plasmid (m): sc-41252-SH, Tim9A shRNA (h) Lentiviral Particles: sc-41251-V and Tim9A shRNA (m) Lentiviral Particles: sc-41252-V.

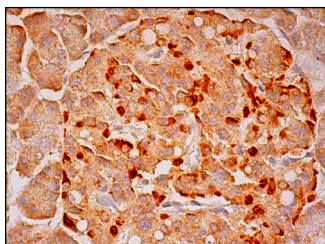
Molecular Weight of Tim9A: 10 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



Tim9A (N-13): sc-17058. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and Islets of Langerhans.

RESEARCH USE

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