

Tim9A (SA-19): sc-101285

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 14q23.1, 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.

CHROMOSOMAL LOCATION

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

SOURCE

Tim9A (SA-19) is a mouse monoclonal antibody raised against recombinant Tim9A of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Tim9A (SA-19) 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), 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), 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.

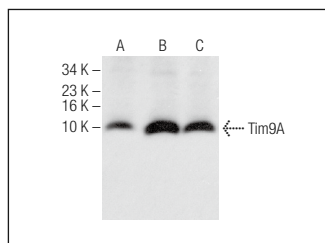
Molecular Weight of Tim9A: 10 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, PC-3 cell lysate: sc-2220 or K-562 whole cell lysate: sc-2203.

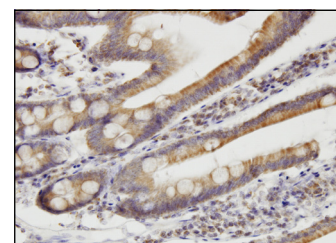
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Tim9A (SA-19): sc-101285. Western blot analysis of Tim9A expression in NIH/3T3 (A), PC-3 (B) and K-562 (C) whole cell lysates.



Tim9A (SA-19): sc-101285. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human small intestine tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Pereira, S.P., et al. 2015. Effects of moderate global maternal nutrient reduction on fetal baboon renal mitochondrial gene expression at 0.9 gestation. *Am. J. Physiol. Renal Physiol.* 308: F1217-F1228.
2. Habich, M., et al. 2019. Vectorial import via a metastable disulfide-linked complex allows for a quality control step and import by the mitochondrial disulfide relay. *Cell Rep.* 26: 759-774.e5.

RESEARCH USE

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

PROTOCOLS

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