

Tom40 (N-14): sc-48691

BACKGROUND

The mitochondrial preprotein translocases of the outer membrane (Tom) is a multisubunit protein complex that facilitates the import of nucleus-encoded precursor proteins across the mitochondrial outer membrane. The Tom machinery consists of import receptors for the initial binding of cytosolically synthesized preproteins and a general import pore (GIP) for the membrane translocation of various preproteins into the mitochondria. The import receptors include Tom20 and Tom22, which form a heteromeric receptor complex that initiates the insertion of newly synthesized proteins into the outer membrane and then directs the precursor protein into the GIP. In yeast, Tom22 is the essential component of the import receptor complex as it functions as both a receptor for the preproteins and serves as a docking point for both Tom20 and the GIP. Tom22 directly associates with Tom40, the major component of the GIP, and thereby forms a stable interaction between the two core complexes to facilitate the fluid movement of preproteins into the mitochondria. The insertion of Tom40 into the Tom machinery requires the initial binding of Tom40 to Tom20 and leads to the efficient incorporation of Tom40 precursors into preexisting Tom complexes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TOMM40 (human) mapping to 19q13.32; Tomm40 (mouse) mapping to 7 A3.

SOURCE

Tom40 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Tom40 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-48691 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tom40 (N-14) is recommended for detection of Tom40 isoforms 1 and 2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Tom40 (N-14) is also recommended for detection of Tom40 isoforms 1 and 2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Tom40 siRNA (h): sc-61697, Tom40 siRNA (m): sc-61698, Tom40 shRNA Plasmid (h): sc-61697-SH, Tom40 shRNA Plasmid (m): sc-61698-SH, Tom40 shRNA (h) Lentiviral Particles: sc-61697-V and Tom40 shRNA (m) Lentiviral Particles: sc-61698-V.

Molecular Weight of Tom40: 40 kDa.

Positive Controls: MM-142 cell lysate: sc-2246.

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.

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 or our catalog for detailed protocols and support products.



Try **Tom40 (D-2): sc-365467** or **Tom40 (H-7): sc-365466**, our highly recommended monoclonal alternatives to Tom40 (N-14).