

Tom20 (C-20): sc-11021

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.

CHROMOSOMAL LOCATION

Genetic locus: TOMM20 (human) mapping to 1q42.3; Tomm20 (mouse) mapping to 8 E2.

SOURCE

Tom20 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Tom20 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-11021 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Tom20 (C-20) is recommended for detection of Tom20 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).

Tom20 (C-20) is also recommended for detection of Tom20 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Tom20 siRNA (h): sc-36691, Tom20 siRNA (m): sc-36692, Tom20 shRNA Plasmid (h): sc-36691-SH, Tom20 shRNA Plasmid (m): sc-36692-SH, Tom20 shRNA (h) Lentiviral Particles: sc-36691-V and Tom20 shRNA (m) Lentiviral Particles: sc-36692-V.

Molecular Weight of Tom20: 20 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MM-142 cell lysate: sc-2246 or Jurkat whole cell lysate: sc-2204.

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.

SELECT PRODUCT CITATIONS

- Galati, D., et al. 2009. Role of nuclear-encoded subunit Vb in the assembly and stability of cytochrome c oxidase complex: implications in mitochondrial dysfunction and ROS production. *Biochem. J.* 420: 439-449.
- Ravera, S., et al. 2009. Evidence for aerobic ATP synthesis in isolated myelin vesicles. *Int. J. Biochem. Cell Biol.* 41: 1581-1591.
- Panfoli, I., et al. 2009. Evidence for aerobic metabolism in retinal rod outer segment disks. *Int. J. Biochem. Cell Biol.* 41: 2555-2565.
- Ravera, S., et al. 2011. Characterization of myelin sheath F₀F₁-ATP synthase and its regulation by IF₁. *Cell Biochem. Biophys.* 59: 63-70.
- Ravera, S., et al. 2013. Oxidative phosphorylation in sciatic nerve myelin and its impairment in a model of dysmyelinating peripheral neuropathy. *J. Neurochem.* 126: 82-92.

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 **Tom20 (F-10): sc-17764** or **Tom20 (29): sc-136211**, our highly recommended monoclonal alternatives to Tom20 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Tom20 (F-10): sc-17764**.