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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
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SANTA CRUZ BIOTECHNOLOGY, INC.

Tom20 (F-10): sc-17764

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Rapaport, D., et al. 1997. Mitochondrial protein import. Tom40 plays a major role in targeting and translocation of preproteins by forming a specific binding site for the presequence. J. Biol. Chem. 272: 18725-18731.
2. Dekker, P.J., et al. 1998. Preprotein translocase of the outer mitochondrial membrane: molecular dissection and assembly of the general import pore complex. Mol. Cell. Biol. 18: 6515-6524.

CHROMOSOMAL LOCATION

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

SOURCE

Tom20 (F-10) is a mouse monoclonal antibody raised against amino acids 1-145 of Tom20 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tom20 (F-10) is available conjugated to agarose (sc-17764 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17764 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17764 PE), fluorescein (sc-17764 FITC), Alexa Fluor® 488 (sc-17764 AF488), Alexa Fluor® 546 (sc-17764 AF546), Alexa Fluor® 594 (sc-17764 AF594) or Alexa Fluor® 647 (sc-17764 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-17764 AF680) or Alexa Fluor® 790 (sc-17764 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Tom20 (F-10) is recommended for detection of Tom20 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:500), 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).

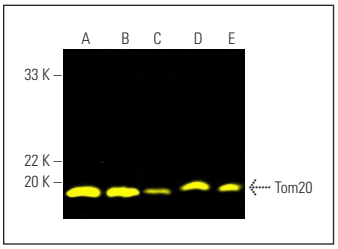
Tom20 (F-10) is also recommended for detection of Tom20 in additional species, including bovine.

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.

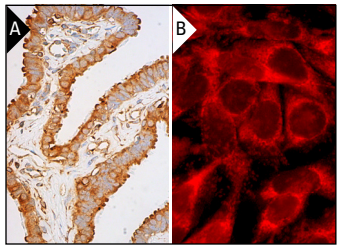
Molecular Weight of Tom20: 20 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SW480 cell lysate: sc-2219 or Caki-1 cell lysate: sc-2224.

DATA



Tom20 (F-10) Alexa Fluor® 488: sc-17764 AF488. Direct fluorescent western blot analysis of Tom20 expression in Raji (**A**), SW480 (**B**), Jurkat (**C**), Caki-1 (**D**) and A549 (**E**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



Tom20 (F-10) HRP: sc-17764 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**A**). Tom20 (F-10) Alexa Fluor® 594: sc-17764 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing mitochondrial localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Bakin, R.E. and Jung, M.O. 2004. Cytoplasmic sequestration of HDAC7 from mitochondrial and nuclear compartments upon initiation of apoptosis. J. Biol. Chem. 279: 51218-51225.
2. Xian, H. and Liou, Y.C. 2019. Loss of MIEF1/MiD51 confers susceptibility to BAX-mediated cell death and PINK1-PRKN-dependent mitophagy. Autophagy 20: 1-19.
3. Park, J.S., et al. 2019. Dual roles of ULK1 (unc-51 like autophagy activating kinase 1) in cytoprotection against lipotoxicity. Autophagy 25: 1-20.

RESEARCH USE

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