

Tom70 (A-8): sc-390545



The Power to Question

BACKGROUND

The mitochondrial protein translocase (MPT) shuttles preproteins into the mitochondria via recognition of an amino-terminal signal sequence (presequence) or an internal targeting domain within the preprotein. MPT contains several components that form three translocons, one in the outer membrane (Tom40/70) and two in the inner membrane (Tim17/23 and Tim22/54). The integral membrane proteins of the MPT include Tom70, Tom37, Tom22 and Tom20. MPT-dependent transport delivers the substrate protein to an outer membrane channel consisting of five hydrophobic proteins, Tom40, Tom38, Tom7, Tom6 and Tom5. The human Tom70 gene maps to chromosome 3q12.2.

CHROMOSOMAL LOCATION

Genetic locus: TOMM70 (human) mapping to 3q12.2; Tomm70a (mouse) mapping to 16 C1.1.

SOURCE

Tom70 (A-8) is a mouse monoclonal antibody raised against amino acids 492-608 mapping at the C-terminus of Tom70 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tom70 (A-8) is available conjugated to agarose (sc-390545 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390545 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390545 PE), fluorescein (sc-390545 FITC), Alexa Fluor® 488 (sc-390545 AF488), Alexa Fluor® 546 (sc-390545 AF546), Alexa Fluor® 594 (sc-390545 AF594) or Alexa Fluor® 647 (sc-390545 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390545 AF680) or Alexa Fluor® 790 (sc-390545 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Tom70 (A-8) is recommended for detection of Tom70 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Tom70 (A-8) is also recommended for detection of Tom70 in additional species, including equine and canine.

Suitable for use as control antibody for Tom70 siRNA (h): sc-106627, Tom70 siRNA (m): sc-154554, Tom70 shRNA Plasmid (h): sc-106627-SH, Tom70 shRNA Plasmid (m): sc-154554-SH, Tom70 shRNA (h) Lentiviral Particles: sc-106627-V and Tom70 shRNA (m) Lentiviral Particles: sc-154554-V.

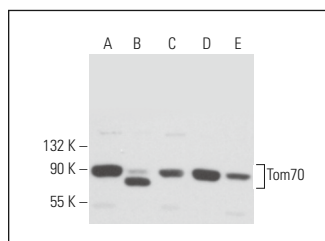
Molecular Weight of Tom70: 70 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, A-10 cell lysate: sc-3806 or HL-60 whole cell lysate: sc-2209.

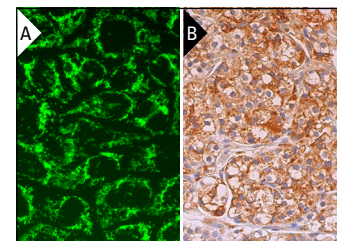
STORAGE

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

DATA



Tom70 (A-8): sc-390545. Western blot analysis of Tom70 expression in HL-60 (A), SCC-4 (B), Caco-2 (C), M1 (D) and A-10 (E) whole cell lysates.



Tom70 (A-8): sc-390545. Immunofluorescence staining of formalin-fixed A-431 cells showing mitochondrial localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Li, J., et al. 2014. Tom70 serves as a molecular switch to determine pathological cardiac hypertrophy. *Cell Res.* 24: 977-993.
- Bauckman, K., et al. 2015. Iron alters cell survival in a mitochondria-dependent pathway in ovarian cancer cells. *Biochem. J.* 466: 401-413.
- Wei, Y., et al. 2017. Prohibitin 2 is an inner mitochondrial membrane mitophagy receptor. *Cell* 168: 224-238.
- Gouspillou, G., et al. 2018. Protective role of Parkin in skeletal muscle contractile and mitochondrial function. *J. Physiol.* 596: 2565-2579.
- Tang, Z., et al. 2019. Tom40 targets Atg2 to mitochondria-associated ER membranes for phagophore expansion. *Cell Rep.* 28: 1744-1757.
- Marek-lannucci, S., et al. 2019. Myocardial hypothermia increases autophagic flux, mitochondrial mass and myocardial function after ischemia-reperfusion injury. *Sci. Rep.* 9: 10001.
- Dube, K., et al. 2019. Melatonin has profound effects on mitochondrial dynamics in myocardial ischaemia/reperfusion. *Heliyon* 5: e02659.
- Shah, S.S., et al. 2019. APOL1 kidney risk variants induce cell death via mitochondrial translocation and opening of the mitochondrial permeability transition pore. *J. Am. Soc. Nephrol.* 30: 2355-2368.
- Moskal, N., et al. 2020. ROCK inhibitors upregulate the neuroprotective Parkin-mediated mitophagy pathway. *Nat. Commun.* 11: 88.
- Horibata, Y., et al. 2020. The phosphatidylcholine transfer protein StarD7 is important for myogenic differentiation in mouse myoblast C2C12 cells and human primary skeletal myoblasts. *Sci. Rep.* 10: 2845.
- Kondadi, A.K., et al. 2020. Cristae undergo continuous cycles of membrane remodelling in a MICOS-dependent manner. *EMBO Rep.* 21: e49776.

RESEARCH USE

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