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TOM70 Antibody

Catalog # ASC10817

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	O94826
Other Accession	NP_055635, 54607135
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	67455
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TOM70 antibody can be used for detection of TOM70 by Western blot at 2 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	9868
Other Names	Mitochondrial import receptor subunit TOM70, Mitochondrial precursor proteins import receptor, Translocase of outer membrane 70 kDa subunit, TOMM70A, KIAA0719, TOM70
Target/Specificity	TOMM70A; At least two isoforms of TOM70 are known to exist; this antibody will only detect the larger isoform.
Reconstitution & Storage	TOM70 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TOM70 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TOMM70 (HGNC:11985)
Function	Acts as a receptor of the preprotein translocase complex of the outer mitochondrial membrane (TOM complex) (PubMed:12526792). Recognizes and mediates the translocation of mitochondrial preproteins from the cytosol into the mitochondria in a chaperone dependent manner (PubMed:12526792, PubMed:35025629). Mediates TBK1 and IRF3 activation induced by MAVS in response to Sendai virus infection and promotes host antiviral responses during virus infection (PubMed:20628368, PubMed:25609812,

PubMed:32728199). Upon Sendai virus infection, recruits HSP90AA1:IRF3:BAX in mitochondrion and the complex induces apoptosis (PubMed:25609812).

Cellular Location Mitochondrion outer membrane; Single-pass membrane protein

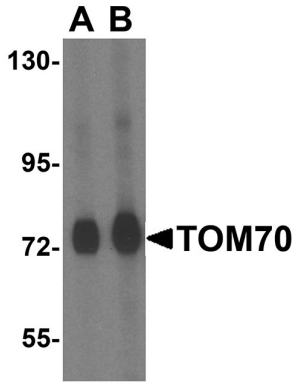
Background

TOM70 Antibody: The translocase of outer mitochondrial membrane (TOM) complex is a multisubunit complex involved in the recognition, unfolding, and translocation of preproteins into the mitochondria. TOM70, an important member of the TOM complex, contains a tetratricopeptide repeat domain similar to those found in cytosolic chaperones such as Hsp90 and Hsc70 and provides a docking site for these proteins. This interaction is thought to be a critical first step in the TOM70-dependent mitochondrial import, followed by contact between the preprotein and TOM70. After targeting to TOM70, preproteins are translocated through the outer membrane via the TOM40 import pore complex. The precise mechanism of how preproteins progress from TOM70 to TOM40 to full translocation is still unclear.

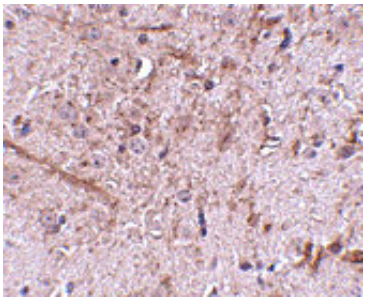
References

Kutik S, Guiard B, Meyer HE, et al. Cooperation of translocase complexes in mitochondrial protein import. J. Cell Biol. 2007; 179:585-91.
Young JC, Hoogenraad NJ, and Hartl FU. Molecular chaperones Hsp90 and Hsc70 deliver preproteins to the mitochondrial import receptor Tom70. Cell 2003; 112:41-50.

Images

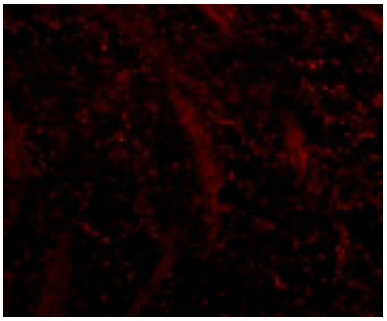


Western blot analysis of TOM70 in mouse brain tissue lysate with TOM70 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of TOM70 in mouse brain tissue with TOM70 antibody at 2.5 µg/mL.

Immunofluorescence of TOM70 in Mouse Brain tissue with TOM70 antibody at 5 µg/mL.



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