

TIMM23 Antibody / Translocase of inner mitochondrial membrane 23 Antibody (FY13615)

Catalog No.	Formulation	Size
FY13615	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

[Bulk quote request](#)

Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	O14925
Applications	Western Blot : 0.5-1ug/ml Immunohistochemistry (FFPE) : 2-5ug/ml
Limitations	The TIMM23 Antibody / Translocase of inner mitochondrial membrane 23 Antibody is available for research use only.

TIMM23 Antibody by IHC in human colon carcinoma. Immunohistochemistry of paraffin-embedded human colon carcinoma using Translocase of inner mitochondrial membrane 23 Antibody demonstrates strong granular brown cytoplasmic staining in malignant glandular epithelial cells. Heat-mediated antigen retrieval was performed with EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Sections were incubated with primary antibody at 2 ug/mL overnight at 4oC. HRP-conjugated secondary antibody and DAB chromogen produced the brown reaction product, while hematoxylin counterstained cell nuclei blue.

TIMM23 Antibody by WB in human cells and rodent heart. Western blot analysis using Translocase of inner mitochondrial membrane 23 Antibody detects a prominent band consistent with the expected molecular weight of approximately 22 kDa in human HepG2 (lane 1), Jurkat (lane 2), MCF-7 (lane 3), Caco-2 (lane 4), rat heart (lane 5), and mouse heart (lane 6) lysates. Reduced samples containing 30 ug total protein per lane were separated under reducing conditions by 12% SDS-PAGE and transferred to nitrocellulose. Following blocking with 5% nonfat milk, membranes were incubated with primary antibody at 1:1000 overnight at 4oC. Bound antibody was visualized with HRP-conjugated secondary antibody and chemiluminescent substrate.

TIMM23 Antibody by IHC in human thyroid carcinoma. Immunohistochemistry of paraffin-embedded human thyroid carcinoma using Translocase of inner mitochondrial membrane 23 Antibody demonstrates brown cytoplasmic staining in neoplastic epithelial cells. Heat-mediated antigen retrieval was performed with EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Sections were incubated with primary antibody at 2 ug/mL overnight at 4oC. HRP-conjugated secondary antibody and DAB chromogen produced the brown reaction product, while hematoxylin counterstained cell nuclei blue.

TIMM23 Antibody by WB in human cells and rodent tissues. Western blot analysis using Translocase of inner mitochondrial membrane 23 Antibody detects a prominent band consistent with the expected molecular weight of approximately 22 kDa in human Caco-2 (lane 1), A549 (lane 2), HepG2 (lane 3), 293T (lane 4), rat heart (lane 5), rat kidney (lane 6), mouse heart (lane 7), and mouse kidney (lane 8) lysates. Reduced samples containing 30 ug total protein per lane were separated under reducing conditions by 12% SDS-PAGE and transferred to nitrocellulose. Following blocking with 5% nonfat milk, membranes were incubated with primary antibody at 0.5 ug/mL overnight at 4oC. Bound antibody was visualized with HRP-conjugated secondary antibody and chemiluminescent substrate.

TIMM23 Antibody by IHC in human colon carcinoma. Immunohistochemistry of paraffin-embedded human colon carcinoma using Translocase of inner mitochondrial membrane 23 Antibody demonstrates widespread brown cytoplasmic staining in tumor glands, with hematoxylin-positive nuclei. Heat-mediated antigen retrieval was performed with EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Sections were incubated with primary antibody at 2 ug/mL overnight at 4oC. HRP-conjugated secondary antibody and DAB chromogen produced the brown reaction product, while hematoxylin counterstained cell nuclei blue.

Description

TIMM23 Antibody / Translocase of inner mitochondrial membrane 23 Antibody recognizes TIMM23, a protein with important roles in cellular physiology. TIMM23 encodes translocase of inner mitochondrial membrane 23, a central component of the TIM23 protein-import machinery. Most mitochondrial proteins are encoded in the nucleus, synthesized in the cytosol, and delivered to mitochondria through specialized translocase complexes. Their successful import is necessary for respiratory-chain assembly, metabolic activity, organelle maintenance, and numerous mitochondrial signaling functions.

The TIM23 complex mediates the movement of precursor proteins carrying appropriate targeting signals across or into the inner mitochondrial membrane. TIMM23 forms part of the membrane-embedded channel system and works with other core components, including TIMM17, as well as regulatory and motor-associated factors. Protein transfer depends on the inner-membrane electrochemical potential and, for matrix-directed substrates, on ATP-dependent activities of the import motor. Translocase of inner mitochondrial membrane 23 Antibody is a useful designation for this molecular target.

Different precursor proteins are sorted either into the mitochondrial matrix or laterally into the inner membrane, depending on their targeting sequences and additional structural information. TIM23 machinery helps coordinate these alternative routes while preserving the integrity of the membrane barrier. Defects in mitochondrial protein import can disrupt multiple pathways at once because imported proteins are required for oxidative phosphorylation, metabolite transport, and organelle biogenesis.

TIMM23 is consequently important for the relationship between nuclear gene expression and mitochondrial function. The protein illustrates the dependence of mitochondrial physiology on coordinated transport across two membranes and on

accurate recognition of protein-targeting signals. Its molecular partners and dynamic interactions are central to the organization of the mitochondrial import pathway. NSJ Bioreagents provides TIMM23 Antibody for research into the molecular biology of TIMM23. A TIMM23 Antibody supports investigation of the biological processes associated with this protein.

Explore related research targets in our [Cell Biology Antibodies](#) collection.

Application Notes

An appropriate dilution of the TIMM23 Antibody / Translocase of inner mitochondrial membrane 23 Antibody should be determined empirically before routine use.

Immunogen

The TIMM23 Antibody was generated using a synthetic peptide corresponding to a sequence in the middle region of human TIM23/TIMM23.

Storage

The TIMM23 Antibody is stable for up to one month at 4°C after reconstitution. For longer-term storage, aliquot and store at -20°C for up to six months. Do not repeatedly freeze and thaw.

Alternate Names

TIMM23 antibody, Mitochondrial import inner membrane translocase subunit Tim23 antibody, translocase of inner mitochondrial membrane 23 antibody, TIMM 23 antibody, TIMM23 rabbit polyclonal antibody