

DNAJA3 Antibody / DnaJ homolog subfamily A member 3, mitochondrial Antibody (FY13576)

Catalog No.	Formulation	Size
FY13576	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

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Species Reactivity	Human
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	Q96EY1
Applications	Western Blot : 0.5-1ug/ml Immunofluorescence : 5ug/ml ELISA : 0.1-0.5 ug/ml
Limitations	This DNAJA3 Antibody / DnaJ homolog subfamily A member 3, mitochondrial Antibody is intended for research use only.

DNAJA3 Antibody by IF in HeLa cells. Immunofluorescence using DnaJ homolog subfamily A member 3, mitochondrial Antibody reveals granular green cytoplasmic staining surrounding blue DAPI-stained nuclei. Red alpha-tubulin counterstaining outlines the cell bodies and cytoskeletal network, while the green signal is enriched in discrete cytoplasmic structures. DNAJA3 is known to associate with mitochondria, although this image does not include a mitochondrial colocalization marker. Following enzyme antigen retrieval and goat serum blocking, cells were incubated with 5 ug/mL primary antibody overnight at 4°C and visualized using fluorescent secondary antibodies.

DNAJA3 Antibody by WB in human cell lines. Western blot analysis using DnaJ homolog subfamily A member 3, mitochondrial Antibody detects a band near 40 kDa in HeLa (lane 1), K562 (lane 2), MCF-7 (lane 3), and A549 (lane 4), compared with a calculated molecular weight of approximately 52 kDa. Published studies document processed mitochondrial TID1 isoforms of approximately 40 and 43 kDa, although the detected band has not been confirmed as a specific isoform. Reduced lysates containing 30 ug total protein per lane were resolved by 10% SDS-PAGE and transferred to nitrocellulose. The membrane was blocked with 5% nonfat milk, followed by primary antibody incubation at 0.5 ug/mL overnight at 4oC. Bound antibody was detected using an HRP-conjugated secondary antibody and chemiluminescent substrate.

Description

DNAJA3 Antibody / DnaJ homolog subfamily A member 3, mitochondrial Antibody detects DNAJA3, a mitochondrial member of the Hsp40/DnaJ co-chaperone family, also called Tid1. Its principal role is to support mitochondrial protein quality control through cooperation with Hsp70-family chaperones. DNAJA3 contains a conserved J domain that stimulates ATP hydrolysis by its partner chaperones, enabling cycles of substrate binding and release. These cycles help newly imported proteins fold correctly and limit the accumulation of damaged or improperly assembled proteins within mitochondria. Alternative splicing generates forms of DNAJA3 with distinct properties, adding complexity to the regulation of this co-chaperone.

Mitochondrial proteins are produced from both nuclear and mitochondrial genes. Many nuclear-encoded proteins are synthesized in the cytoplasm and must be imported through mitochondrial membranes before reaching their functional destinations. Chaperone systems help maintain these proteins in suitable conformations during transport and maturation. DNAJA3 participates in the mitochondrial proteostasis network, alongside other factors that promote folding, assembly, and turnover. Its J domain does not act as an independent protein-folding motor; instead, it modulates the activity of associated Hsp70 proteins. The efficiency of this partnership can influence the stability of proteins needed for mitochondrial maintenance. The DnaJ homolog subfamily A member 3, mitochondrial Antibody designation refers to this same protein target.

DNAJA3 has also been investigated in pathways associated with cellular survival, proliferation, and responses to stress. Some studies describe interactions with signaling regulators, although these context-dependent findings should be distinguished from its established chaperone-related activity. Defects in mitochondrial proteostasis may impair respiratory function and activate compensatory stress responses. The relationship between DNAJA3 and these responses depends on cell type, protein partners, and the particular form of the co-chaperone. NSJ Bioreagents includes DNAJA3 among targets involved in mitochondrial homeostasis and protein maturation. A DNAJA3 Antibody provides a means of examining the molecular functions associated with DNAJA3.

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

Application Notes

The optimal working dilution of the DNAJA3 Antibody / DnaJ homolog subfamily A member 3, mitochondrial Antibody should be determined empirically by the investigator.

Immunogen

The DNAJA3 Antibody was generated using e. coli-derived human TID1/DNAJA3 recombinant protein (amino acids K73-G436).

Storage

After reconstitution, the DNAJA3 Antibody may be stored at 4oC for up to one month. For longer storage, aliquot and freeze at -20oC for up to six months. Avoid repeated freezing and thawing.

Alternate Names

DNAJA3 antibody, DnaJ homolog subfamily A member 3, mitochondrial antibody, DnaJ homolog subfamily A member 3 antibody, mitochondrial antibody, DnaJ heat shock protein family (Hsp40) member A3 antibody, DnaJ protein Tid 1 antibody, HCA57 antibody, hTid 1 antibody, TID 1 antibody, TID1 antibody