



# Mouse anti-Rat Tim23 monoclonal antibody, clone 43/Ujn34 (CABT-B9340)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

|                           |   |
|---------------------------|---|
| <b>Immunogen</b>          | Rat Tim23 aa. 5-126   |
| <b>Isotype</b>            | IgG2a   |
| <b>Source/Host</b>        | Mouse   |
| <b>Species Reactivity</b> | Mouse, Human, Rat   |
| <b>Clone</b>              | 43/Ujn34  |
| <b>Purification</b>       | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. |
| <b>Conjugate</b>          | Unconjugated  |
| <b>Applications</b>       | WB; IF  |
| <b>Format</b>             | Liquid  |
| <b>Concentration</b>      | 250 µg/ml   |
| <b>Size</b>               | 50 µg, 150 µg   |
| <b>Buffer</b>             | Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.                                |
| <b>Storage</b>            | Store undiluted at -20°C.   |

## BACKGROUND

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|---------------------|--|
| <b>Introduction</b> | Mitochondria, the site of cellular energy production, must import all proteins necessary for their |
|---------------------|--|

function. Import is mediated by two mechanisms: the translocase of the outer membrane (Tom) and the translocase of the inner membrane (Tim). Tim23 and Tim17 are integral membrane proteins that associate to form the import channel for mitochondrial preproteins that contain N-terminal hydrophilic sequences. They also associate with Tim44, an adaptor for the membrane binding of mtHsp70, a matrix heat shock protein, which drives the import of the processed preprotein. The N-terminal intermembrane space domain of Tim23 contains a leucine zipper motif and mediates the formation of a Tim23 dimer. As an imported protein passes through the TOM machinery, its N-terminal matrix targeting sequence interacts with the Tim23 dimer. This induces the dissociation of the dimer and initiation of inner membrane translocation of the presequence. In addition to its 9 kDa N-terminal hydrophilic segment, Tim23 contains a 14 kDa hydrophobic domain with four predicted membrane spans. Thus, Tim23 is an important integral membrane component of the mitochondrial protein translocation machinery.

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**Keywords**

TIMM23; translocase of inner mitochondrial membrane 23 homolog (yeast);

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## GENE INFORMATION

**Entrez Gene ID**

[10431](#)

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