

## Product datasheet

# Anti-MTM1 antibody ab55532

[2 Images](#)

### Overview

|                            |  |
|----------------------------|--|
| <b>Product name</b>        | Anti-MTM1 antibody   |
| <b>Description</b>         | Mouse monoclonal to MTM1   |
| <b>Host species</b>        | Mouse  |
| <b>Tested applications</b> | <b>Suitable for:</b> IHC-P, WB   |
| <b>Species reactivity</b>  | <b>Reacts with:</b> Human  |
| <b>Immunogen</b>           | Recombinant fragment: MASASTSKYN SHSLENESIK RTSRDGVNRD LTEAVPRLPG ETLITDKEVI YICPFNGPIK GRVYITNYRL YLRSLETSS LILDVPLGVI SRIEKMGGAT , corresponding to amino acids 1-100 of Human MTM1<br><a href="#">Run BLAST with ExPASy</a> <a href="#">Run BLAST with NCBI</a> |

### Properties

|                             |   |
|-----------------------------|---|
| <b>Form</b>                 | Liquid  |
| <b>Storage instructions</b> | Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles. |
| <b>Storage buffer</b>       | Preservative: None<br>PBS, pH 7.2   |
| <b>Purity</b>               | Protein G purified  |
| <b>Clonality</b>            | Monoclonal  |
| <b>Isotype</b>              | IgG2a   |
| <b>Light chain type</b>     | kappa   |

### Applications

Our [Abpromise guarantee](#) covers the use of **ab55532** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes                           |
|-------------|-----------|---------------------------------|
| IHC-P       |           | Use a concentration of 3 µg/ml. |

| Application | Abreviews | Notes   |
|-------------|-----------|---|
| WB          |           | Use a concentration of 1 - 5 µg/ml.<br>This antibody has only been tested in WB against the recombinant fragment used as immunogen. We have no data on the detection of endogenous protein. |

## Target

### Function

Lipid phosphatase which dephosphorylates phosphatidylinositol 3-monophosphate (PI3P) and phosphatidylinositol 3,5-bisphosphate (PI(3,5)P2). Has also been shown to dephosphorylate phosphotyrosine- and phosphoserine-containing peptides. Negatively regulates EGFR degradation through regulation of EGFR trafficking from the late endosome to the lysosome. Plays a role in vacuolar formation and morphology. Regulates desmin intermediate filament assembly and architecture. Plays a role in mitochondrial morphology and positioning. Required for skeletal muscle maintenance but not for myogenesis.

### Involvement in disease

Defects in MTM1 are the cause of centronuclear myopathy X-linked (XCNM) [MIM:310400]; also known as X-linked myotubular myopathy (XLMTM) or myotubular myopathy type 1 (MTM1). Centronuclear myopathies are congenital muscle disorders characterized by progressive muscular weakness and wasting involving mainly limb girdle, trunk, and neck muscles. It may also affect distal muscles. Weakness may be present during childhood or adolescence or may not become evident until the third decade of life. Ptosis is a frequent clinical feature. The most prominent histopathologic features include high frequency of centrally located nuclei in muscle fibers not secondary to regeneration, radial arrangement of sarcoplasmic strands around the central nuclei, and predominance and hypotrophy of type 1 fibers.

### Sequence similarities

Belongs to the protein-tyrosine phosphatase family. Non-receptor class myotubularin subfamily. Contains 1 GRAM domain.  
Contains 1 myotubularin phosphatase domain.

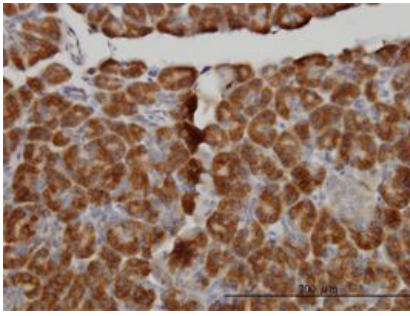
### Domain

The GRAM domain mediates binding to PI(3,5)P2 and, with lower affinity, to other phosphoinositides.

### Cellular localization

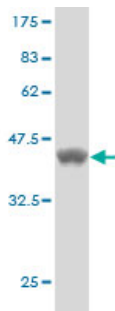
Cytoplasm. Cell membrane. Cell projection > filopodium. Cell projection > ruffle. Late endosome. Localizes as a dense cytoplasmic network. Also localizes to the plasma membrane, including plasma membrane extensions such as filopodia and ruffles. Predominantly located in the cytoplasm following interaction with MTMR12. Recruited to the late endosome following EGF stimulation.

## Images



MTM1 antibody (ab55532) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human pancreas.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MTM1 antibody (ab55532)



Western blot against tagged recombinant protein immunogen using ab55532 MTM1 antibody at 1ug/ml. Predicted band size of immunogen is 34 kDa

Western blot - Anti-MTM1 antibody (ab55532)

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