abcam

ab284689

# Anti-MST4 antibody [EP1864Y] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EP1864Y |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.997 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant full length protein - Human |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Recombinant full length protein - Human, Mouse, Rat, Human |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant full length protein - Human |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant full length protein - Human |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |

| | |
|---|---|
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Recombinant full length protein - Human |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information STK26

| | |
|---|---|
| **Function** | Serine/threonine-protein kinase that acts as a mediator of cell growth (PubMed:11641781, PubMed:17360971). Modulates apoptosis (PubMed:11641781, PubMed:17360971). In association with STK24 negatively regulates Golgi reorientation in polarized cell migration upon RHO activation (PubMed:27807006). Phosphorylates ATG4B at 'Ser-383', thereby increasing autophagic flux (PubMed:29232556). Part of the striatin-interacting phosphatase and kinase (STRIPAK) complexes. STRIPAK complexes have critical roles in protein (de)phosphorylation and are regulators of multiple signaling pathways including Hippo, MAPK, nuclear receptor and cytoskeleton remodeling. Different types of STRIPAK complexes are involved in a variety of biological processes such as cell growth, differentiation, apoptosis, metabolism and immune regulation (PubMed:18782753). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## Notes

ab284689 is the carrier-free version of ab52491

**Patented technology**

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | MST4 also known as mammalian sterile 20-like kinase 4 is a serine/threonine kinase with a molecular mass of approximately 53 kDa. It belongs to the germinal center kinase (GCK) family and is expressed in various tissues showing higher levels in the brain and testis. MST4 localizes to the Golgi apparatus where it plays a role in regulating cellular processes. |
| **Biological function summary** | MST4 contributes to cell growth apoptosis and stress response signaling. It does not operate alone; MST4 is a part of the STRIPAK complex. The protein involves itself in the regulation of the actin cytoskeleton thereby influencing cell motility and polarity. By modulating these processes MST4 can impact developmental and stress-induced cellular pathways. |
| **Pathways** | MST4 participates in the Hippo signaling pathway which regulates organ size by controlling cell proliferation and apoptosis. In this pathway MST4 interacts with other proteins such as MST1 and MST2 to execute its functions. MST4 also participates in the MAPK signaling pathway where it connects to various cellular stress responses contributing to the transcriptional activity of downstream effectors. |
| **Associated diseases and disorders** | MST4 has implications in cancer and neurodegenerative diseases. Alterations in MST4 expression or activity have been associated with tumor progression in several cancers. Additionally it's linked to neurodegeneration through its interactions with proteins such as Tau where dysregulated pathways may lead to pathological conditions. These connections highlight the importance of MST4 in maintaining cellular homeostasis and the implications of its dysfunction in disease states. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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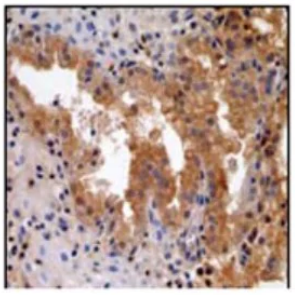
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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## 7 product images



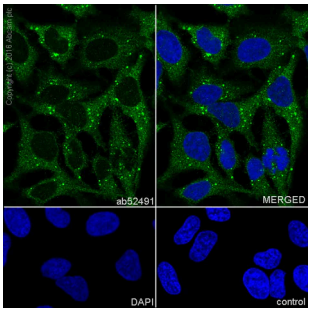
### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-MST4 antibody

This data was developed using ab52491, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded human placenta using ab52491 at a 1/100 dilution.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

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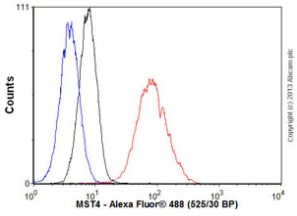



### Immunocytochemistry/ Immunofluorescence - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-MST4 antibody

This data was developed using ab52491, the same antibody clone in a different buffer formulation. Immunocytochemistry/Immunofluorescence analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) labelling MST4 with purified ab52491 at 1/500. Cells were fixed with 100% methanol and permeabilized with 0.1% triton X-100. ab150077 Goat anti rabbit IgG (Alexa Fluor® 488) at 1/1000 was used as the secondary antibody. Nuclei were counterstained with DAPI. PBS was used instead of the primary antibody as the negative control.

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## Flow Cytometry (Intracellular) - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Flow Cytometry (Intracellular) staining using rabbit Anti-MST4 antibody

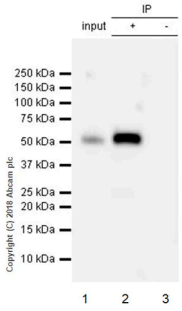
This data was developed using ab52491, the same antibody clone in a different buffer formulation. Overlay histogram showing HeLa cells stained with ab52491 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab52491, 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C.

Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x$10^6$ cells) used under the same conditions.

Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.




## Immunoprecipitation - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

This data was developed using ab52491, the same antibody clone in a different buffer formulation.MST4 was immunoprecipitated using ab52491 at 1:100 dilution (2µg in 0.35mg lysates).
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-MST4 antibody [EP1864Y] (ab52491) at 1/1000 dilution

Lane 1:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate at 10 µg

Lane 2:
HeLa whole cell lysate immunoprecipitated with ab52491 1:100 dilution (2µg in 0.35mg lysates) at 10 µg

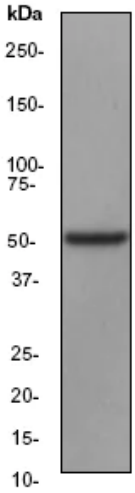
Lane 3:
HeLa whole cell lysate immunoprecipitated with Rabbit monoclonal IgG (ab172730) 1:100 dilution (2µg in 0.35mg lysates), at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Predicted band size: 47 kDa

Exposure time: 10s




## Western blot - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Western blot staining of HeLa cell lysate using rabbit Anti-MST4 antibody

This data was developed using ab52491, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MST4 antibody [EP1864Y] (ab52491) at 1/200000 dilution

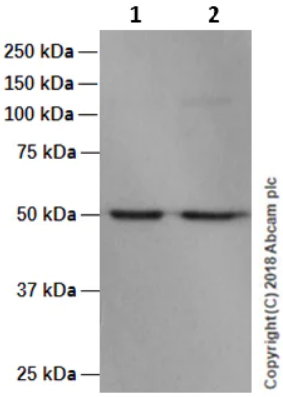
All lanes:
HeLa cell lysate at 10 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 47 kDa

Observed band size: 50 kDa




## Western blot - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Western blot staining using rabbit Anti-MST4 antibody

This data was developed using ab52491, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689) at 1/100000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Rat brain tissue lysate at 20 µg

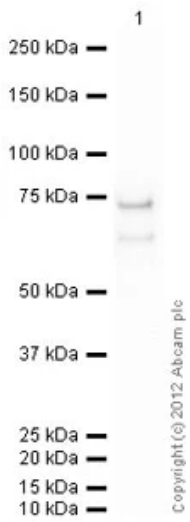
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 47 kDa

Observed band size: 50 kDa

Exposure time: 30s




# Western blot - Anti-MST4 antibody [EP1864Y] - BSA and Azide free (ab284689)

MST4 Western blot staining using rabbit Anti-MST4 antibody

This data was developed using ab52491, the same antibody clone in a different buffer formulation. ab52491 recognizes the full length tagged recombinant MST4 protein (ab60341) which has an expected molecular weight of 72 kDa.

All lanes:
Western blot - Anti-MST4 antibody [EP1864Y] (ab52491) at 1/20000 dilution

All lanes:
Western blot - Recombinant human MST4 protein (GST tag N-Terminus) (ab60341) at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Predicted band size: 47 kDa

Exposure time: 20s

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