### Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-MG53 antibody</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to MG53</td>
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<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
</tr>
<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: ICC/IF, WB</td>
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<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat</td>
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<tr>
<td></td>
<td>Predicted to work with: Rabbit, Horse, Cow, Dog, Human, Pig, Chimpanzee, Macaque monkey, Gorilla, Chinese hamster, Orangutan</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide corresponding to Human MG53 aa 50-150 conjugated to keyhole limpet haemocyanin. (Peptide available as ab139970)</td>
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<td><strong>Positive control</strong></td>
<td>WB: Mouse heart, rat heart, mouse skeletal muscle and rat skeletal muscle tissue lysates. ICC/IF: SV40LT-SMC cells.</td>
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<tr>
<td><strong>General notes</strong></td>
<td>This product was previously labelled as TRIM72</td>
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</table>

### Properties

<table>
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<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.</td>
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</tbody>
</table>
| **Storage buffer** | pH: 7.40  
Preservative: 0.02% Sodium azide 
Constituent: PBS  
Note: Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help. |
| **Purity**      | Immunogen affinity purified |
| **Clonality**   | Polyclonal |
| **Isotype**     | IgG |
Function

Muscle-specific protein that plays a central role in cell membrane repair by nucleating the assembly of the repair machinery at injury sites. Specifically binds phosphatidylserine. Acts as a sensor of oxidation: upon membrane damage, entry of extracellular oxidative environment results in disulfide bond formation and homooligomerization at the injury site. This oligomerization acts as a nucleation site for recruitment of TRIM72-containing vesicles to the injury site, leading to membrane patch formation. Probably acts upstream of the Ca(2+)-dependent membrane resealing process. Required for transport of DYSF to sites of cell injury during repair patch formation. Regulates membrane budding and exocytosis. May be involved in the regulation of the mobility of KCNB1-containing endocytic vesicles.

Sequence similarities

Belongs to the TRIM/RBCC family.
Contains 1 B box-type zinc finger.
Contains 1 B30.2/SPRY domain.
Contains 1 RING-type zinc finger.

Post-translational modifications

Disulfide bond formation at Cys-242 occurs in case of membrane damage that cause the entry of the oxidized milieu of the extracellular space, resulting in homooligomerization.

Cellular localization


Applications

Our Abpromise guarantee covers the use of ab118651 in the following tested applications.

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

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>ICC/IF</td>
<td></td>
<td>Use a concentration of 5 - 10 µg/ml.</td>
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<tr>
<td>WB</td>
<td>1/250.</td>
<td>Detects a band of approximately 53 kDa (predicted molecular weight: 53 kDa). Abcam recommends using BSA as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product.</td>
</tr>
</tbody>
</table>

Target

Images
Western blot - Anti-MG53 antibody (ab118651)

All lanes: Anti-MG53 antibody (ab118651) at 1 µg/ml

Lane 1: Heart (Mouse) Tissue Lysate
Lane 2: Heart (Rat) Tissue Lysate
Lane 3: Skeletal Muscle (Mouse) Tissue Lysate
Lane 4: Skeletal Muscle (Rat) Tissue Lysate

Lysates/proteins at 25 µg per lane.

Secondary

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

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 53 kDa
Observed band size: 53 kDa
Additional bands at: 24 kDa, 42 kDa, 49 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 4 minutes

Abcam recommends using BSA as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.

Immunocytochemistry/ Immunofluorescence - Anti-MG53 antibody (ab118651)

ICC/IF image of ab118651 stained SV40LT-SMC cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab118651, 5µg/ml) overnight at +4°C. The secondary antibody (green) was ab96899, DyLight® 488 goat anti-rabbit IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

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