**Anti-Sarcomeric Alpha Actinin antibody [EA-53] ab9465**

**Product name**  
Anti-Sarcomeric Alpha Actinin antibody [EA-53]

**Description**  
Mouse monoclonal [EA-53] to Sarcomeric Alpha Actinin

**Host species**  
Mouse

**Tested applications**  
Suitable for: IHC-P, IHC-Fr, ICC/IF, IHC-FoFr, WB

**Species reactivity**  
Reacts with: Mouse, Rat, Sheep, Rabbit, Goat, Chicken, Hamster, Cow, Cat, Dog, Human, Pig, Xenopus laevis, Fish, Lizard, Snake, Xenopus tropicalis

**Immunogen**  
Full length native protein (purified) corresponding to Rabbit Sarcomeric Alpha Actinin. Purified rabbit skeletal α-actinin.

**Positive control**  
WB: Mouse and rat skeletal muscle and rat heart tissue lysates. IHC-P: Human skeletal muscle tissue.

**General notes**  
This product was changed from ascites to tissue culture supernatant on 9th September 2019. Lot numbers higher than GR3258034 are from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

Storage in “frost-free” freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

**Properties**

**Form**  
Liquid

**Storage instructions**  

**Storage buffer**  
pH: 7.40
Preservative: 0.09% Sodium azide
Constituent: PBS

**Purity**  
Proprietary Purification

**Purification notes**  
Purified from tissue culture supernatant.

**Clonality**  
Monoclonal
### Application

Our **Abpromise guarantee** covers the use of **ab9465** 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>
</tr>
</thead>
<tbody>
<tr>
<td>IHC-P</td>
<td></td>
<td>Use a concentration of 10 - 20 µg/ml. ABC method. We suggest an incubation period of 60 minutes at room temperature. However, depending upon the fixation conditions and the staining system employed, optimal incubation and dilutions should be determined by the user.</td>
</tr>
<tr>
<td>IHC-Fr</td>
<td>★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration. PubMed: 20209123</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration. PubMed: 17383364</td>
</tr>
<tr>
<td>IHC-FoFr</td>
<td>★★☆☆☆☆☆</td>
<td>Use at an assay dependent concentration. PubMed: 20019242</td>
</tr>
<tr>
<td>WB</td>
<td>★★☆☆☆☆☆</td>
<td>Use a concentration of 2 - 4 µg/ml. Detects a band of approximately 103 kDa (predicted molecular weight: 103 kDa).</td>
</tr>
</tbody>
</table>

### Target

**Function**

F-actin cross-linking protein which is thought to anchor actin to a variety of intracellular structures. This is a bundling protein.

**Tissue specificity**

Expressed in both skeletal and cardiac muscle.

**Involvement in disease**

Defects in ACTN2 are the cause of cardiomyopathy dilated type 1AA (CMD1AA) [MIM:612158]. Dilated cardiomyopathy is a disorder characterized by ventricular dilation and impaired systolic function, resulting in congestive heart failure and arrhythmia. Patients are at risk of premature death.

**Sequence similarities**

Belongs to the alpha-actinin family.
Contains 1 actin-binding domain.
Contains 2 CH (calponin-homology) domains.
Contains 2 EF-hand domains.
Contains 4 spectrin repeats.

**Cellular localization**

Cytoplasm > myofibril > sarcomere > Z line. Colocalizes with MYOZ1 and FLNC at the Z-lines of skeletal muscle.

### Images

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ab9465 staining Sarcomeric Alpha Actinin in mouse heart tissue by Immunohistochemistry (Frozen sections). Serial longitudinal (12 µm) sections from wt hearts were incubated with ab9465. Nuclei were visualized with DAPI.

This image was generated using the ascites version of the product.

Immunocytochemistry/Immunofluorescence analysis of H9 hESC and CBiPSC6.2 cells labelling Sarcomeric Alpha Actinin (green) with ab9465 at a dilution of 1/200. An Alexa Fluor® 488-conjugated goat anti-mouse IgG was used as the secondary antibody (1/200).

This image was generated using the ascites version of the product.

Immunofluorescence staining of SNAIL1 and cardiac cell type markers (alpha actinin-cardiomyocyte marker; 1/100 dilution) in the ventricular infarct zone of LAD surgery mice. Scale bars: 50 microns.

5 µm sections of paraffin or OCT embedded hearts were utilized for Masson's Trichrome Staining and immunofluorescence. For SNAIL1 immunofluorescence, antigen retrieval was done in Nuclear Decloaker solution and TSA plus kit was used to amplify SNAIL1 signal.

This image was generated using the ascites version of the product.
**Western blot - Anti-Sarcomeric Alpha Actinin antibody [EA-53] (ab9465)**

**All lanes**: Anti-Sarcomeric Alpha Actinin antibody [EA-53] (ab9465) at 1/250 dilution

**Lane 1**: Mouse skeletal muscle tissue lysate

**Lane 2**: Rat skeletal muscle tissue lysate

**Lane 3**: Rat heart tissue lysate

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes**: Goat Anti-Mouse IgG H&L (HRP) preadsorbed (ab97040) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size**: 103 kDa

**Observed band size**: 103 kDa

**Additional bands at**: 25 kDa, 57 kDa. We are unsure as to the identity of these extra bands.

**Exposure time**: 90 seconds

This image was generated using the ascites version of the product.

**Immunohistochemistry formalin-fixed, paraffin-embedded human tongue labeling Alpha Actinin with ab9465 at 12 µg/mL.**

This image was generated using the ascites version of the product.

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