**Product datasheet**

**Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D] ab11083**

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**Overview**

**Product name**  Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D]

**Description**  Mouse monoclonal [NOQ7.5.4D] to Slow Skeletal Myosin Heavy chain

**Host species**  Mouse

**Tested applications**  Suitable for: ELISA, RIA, IHC-P, Electron Microscopy, WB, ICC/IF

**Species reactivity**  Reacts with: Mouse, Rat, Sheep, Rabbit, Goat, Chicken, Guinea pig, Hamster, Cow, Cat, Dog, Human, Pig

**Immunogen**  Full length native protein (purified) corresponding to Human Slow Skeletal Myosin Heavy chain. Human skeletal muscle myosin purified from myofibrils.

**General notes**  This product was changed from ascites to tissue culture supernatant on 25th October 2016. The following lot(s) is/are from ascites and is still in stock as of 25th October 2016- GR201056, GR231200, GR285981. Lot numbers other than GR201056, GR231200, GR285981 will be from tissue culture supernatant. Please note that the dilutions may need to be adjusted accordingly. Storage in frost-free freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

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**Properties**

**Form**  Liquid

**Storage instructions**  Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

**Storage buffer**  pH: 7.4

Preservative: 0.097% Sodium azide

Constituent: PBS

**Purity**  Proprietary Purification

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

**Clonality**  Monoclonal

**Clone number**  NOQ7.5.4D

**Isotype**  IgG1
Function
Muscle contraction.

Tissue specificity
Both wild type and variant Gln-403 are detected in skeletal muscle (at protein level).

Involvement in disease
Defects in MYH7 are the cause of cardiomyopathy familial hypertrophic type 1 (CMH1) [MIM:192600]. Familial hypertrophic cardiomyopathy is a hereditary heart disorder characterized by ventricular hypertrophy, which is usually asymmetric and often involves the interventricular septum. The symptoms include dyspnea, syncope, collapse, palpitations, and chest pain. They can be readily provoked by exercise. The disorder has inter- and intrafamilial variability ranging from benign to malignant forms with high risk of cardiac failure and sudden cardiac death. Defects in MYH7 are the cause of myopathy myosin storage (MYOMS) [MIM:608358]. In this disorder, muscle biopsy shows type 1 fiber predominance and increased interstitial fat and connective tissue. Inclusion bodies consisting of the beta cardiac myosin heavy chain are present in the majority of type 1 fibers, but not in type 2 fibers. Defects in MYH7 are the cause of scapuloperoneal myopathy MYH7-related (SPMM) [MIM:181430]; also known as scapuloperoneal syndrome myopathic type. SPMM is a progressive muscular atrophy beginning in the lower legs and affecting the shoulder region earlier and more severely than distal arm. Defects in MYH7 are a cause of cardiomyopathy dilated type 1S (CMD1S) [MIM:613426]. 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. Defects in MYH7 are the cause of myopathy distal type 1 (MPD1) [MIM:160500]. MPD1 is a muscular disorder characterized by early-onset selective weakness of the great toe and ankle dorsiflexors, followed by weakness of the finger extensors. Mild proximal weakness occasionally develops years later after the onset of the disease.

Applications

Our Abpromise guarantee covers the use of ab11083 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>ELISA</td>
<td></td>
<td>Use at an assay dependent concentration. Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>RIA</td>
<td></td>
<td>Use at an assay dependent concentration. Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>⭐⭐⭐⭐⭐</td>
<td>1/4000. Perform enzymatic antigen retrieval before commencing with IHC staining protocol.</td>
</tr>
<tr>
<td>Electron Microscopy</td>
<td></td>
<td>Use at an assay dependent concentration. Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>WB</td>
<td></td>
<td>1/5000. Detects a band of approximately 200 kDa (predicted molecular weight: 200 kDa). Use at an assay dependent concentration.</td>
</tr>
<tr>
<td>ICC/IF</td>
<td>⭐⭐⭐⭐⭐</td>
<td>Use at an assay dependent concentration.</td>
</tr>
</tbody>
</table>
**Sequence similarities**

Contains 1 IQ domain.
Contains 1 myosin head-like domain.

**Domain**

The rodlike tail sequence is highly repetitive, showing cycles of a 28-residue repeat pattern composed of 4 heptapeptides, characteristic for alpha-helical coiled coils. Each myosin heavy chain can be split into 1 light meromyosin (LMM) and 1 heavy meromyosin (HMM). It can later be split further into 2 globular subfragments (S1) and 1 rod-shaped subfragment (S2).

**Cellular localization**

Cytoplasm > myofibril. Thick filaments of the myofibrils.

**Images**

![Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D] (ab11083)](image1)

ab11083 at 1/500 dilution, staining Slow Skeletal Myosin Heavy chain in mouse tissue sections by Immunohistochemistry (Formalin/PFA-fixed paraffin embedded sections).

![Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D] (ab11083)](image2)

ab11083 at 1/4000 dilution, staining Slow Skeletal Myosin Heavy chain in rabbit tongue tissue section by Immunohistochemistry (Formalin/PFA-fixed paraffin embedded sections).
**Lane 1**: Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D] (ab11083) at 1/5000 dilution

**Lane 2**: Negative Control

**All lanes**: Rat skeletal muscle whole cell lysate

**Secondary**

**All lanes**: Goat Anti-Mouse IgG-Peroxidase

**Predicted band size**: 200 kDa

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**Lane 1**: Anti-Slow Skeletal Myosin Heavy chain antibody [NOQ7.5.4D] (ab11083) at 1/5000 dilution

**Lane 2**: Negative Control (Secondary only)

**All lanes**: Whole cell extract from rabbit tongue

**Predicted band size**: 200 kDa

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**Please note**: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE"

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