# Product datasheet

## Anti-heavy chain Myosin antibody ab124205

<table>
<thead>
<tr>
<th>Overview</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
<td>Anti-heavy chain Myosin antibody</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit polyclonal to heavy chain Myosin</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: WB, IHC-P</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human</td>
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<tr>
<td></td>
<td>Predicted to work with: Rabbit, Chicken, Dog, Pig</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide conjugated to KLH derived from within residues 100 - 200 of Human Fast Myosin Skeletal Heavy chain. Read Abcam's proprietary immunogen policy</td>
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<tr>
<td><strong>Positive control</strong></td>
<td>This antibody gave a positive signal in Human, Mouse and Rat Skeletal Muscle tissue lysates.</td>
</tr>
</tbody>
</table>

## Properties

| Form | Liquid |
| **Storage instructions** | 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. |
| **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 |

## Applications

Our **Abpromise guarantee** covers the use of ab124205 in the following tested applications.

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

Involvement in disease
Defects in MYH3 are the cause of distal arthrogryposis type 2A (DA2A) [MIM:193700]; also known as Freeman-Sheldon syndrome (FSS). Distal arthrogryposis is a clinically and genetically heterogeneous group of disorders characterized by bone anomalies and joint contractures of the hands and feet, causing medially overlapping fingers, clenched fists, ulnar deviation of fingers, camptodactyly and positional foot deformities. It is a disorder of primary limb malformation without primary neurologic or muscle disease. DA2A is the most severe form of distal arthrogryposis. Affected individuals have contractures of the orofacial muscles, characterized by microstomia with pouting lips, H-shaped dimpling of the chin, deep nasolabial folds, and blepharophimosis. Dysphagia, failure to thrive, growth deficit, and life-threatening respiratory complications (caused by structural anomalies of the oropharynx and upper airways) are frequent. Inheritance is autosomal dominant.

Defects in MYH3 are the cause of distal arthrogryposis type 2B (DA2B) [MIM:601680]; also known as Sheldon-Hall syndrome (SHS) or arthrogryposis multiplex congenita distal type 2B (AMCD2B). DA2B is a form of inherited multiple congenital contractures. Affected individuals have vertical talus, ulnar deviation in the hands, severe camptodactyly, and a distinctive face characterized by a triangular shape, prominent nasolabial folds, small mouth and a prominent chin. DA2B is the most common of the distal arthrogryposis syndromes. It is similar to DA2A but the facial contractures are less dramatic.

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

Developmental stage
Abundantly present in fetal skeletal muscle and not present or barely detectable in heart and adult skeletal muscle.

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
All lanes: Anti-heavy chain Myosin antibody (ab124205) at 1 µg/ml

Lane 1: Human skeletal muscle tissue lysate - total protein (ab29330)
Lane 2: Skeletal Muscle (Mouse) Tissue Lysate
Lane 3: Skeletal Muscle (Rat) Tissue Lysate

Lysates/proteins at 10 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: 223 kDa
Observed band size: 223 kDa
Additional bands at: 40 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 30 seconds
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-heavy chain Myosin antibody (ab124205)

IHC image of Fast Myosin Skeletal Heavy chain staining in Human normal skeletal muscle formalin fixed paraffin embedded tissue section, performed on a Leica BondTM system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab124205, 1µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.
**Western blot - Anti-heavy chain Myosin antibody (ab124205)**

**All lanes**: Anti-heavy chain Myosin antibody (ab124205) at 1 µg/ml

**Lane 1**: Skeletal Muscle (Human) Tissue Lysate - fetal normal tissue
**Lane 2**: Human heart tissue lysate - total protein (ab29431)
**Lane 3**: Human skeletal muscle tissue lysate - total protein (ab29330)
**Lane 4**: Human small intestine tissue lysate - total protein (ab29276)
**Lane 5**: Heart (Human) Tissue Lysate - fetal normal tissue
**Lane 6**: Human skin tissue lysate - total protein (ab30166)

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes**: Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size**: 223 kDa
**Observed band size**: 223 kDa
**Additional bands at**: 190 kDa, 40 kDa, 50 kDa. We are unsure as to the identity of these extra bands.

**Exposure time**: 30 seconds

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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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