

Product datasheet

Anti-Dystrophin antibody [EPR21189] ab218198

KO **VALIDATED** Recombinant RabMAB[®]

★★★★★ 3 Abreviews 1 References 9 Images

Overview

Product name	Anti-Dystrophin antibody [EPR21189]
Description	Rabbit monoclonal [EPR21189] to Dystrophin
Host species	Rabbit
Tested applications	Suitable for: IHC-P, WB, IHC-Fr
Species reactivity	Reacts with: Mouse, Rat
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IHC-P: Mouse cardiac muscle and skeletal muscle tissue; rat colon tissue. WB: Mouse and rat heart tissue lysate.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production For more information see here . Our RabMAB [®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAB[®] patents .

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 long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR21189
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab218198 in the following tested applications.

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

Application	Abreviews	Notes
IHC-P	★★★★★ (2)	1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 427 kDa.
IHC-Fr	★★★★★ (1)	1/50. Positive membrane staining of cardiomyocytes on mouse and Rat heart tissue section (PMID: 26430202).

Target

Function

Anchors the extracellular matrix to the cytoskeleton via F-actin. Ligand for dystroglycan. Component of the dystrophin-associated glycoprotein complex which accumulates at the neuromuscular junction (NMJ) and at a variety of synapses in the peripheral and central nervous systems and has a structural function in stabilizing the sarcolemma. Also implicated in signaling events and synaptic transmission.

Tissue specificity

Expressed in muscle fibers accumulating in the costameres of myoplasm at the sarcolemma. Expressed in brain, muscle, kidney, lung and testis. Isoform 5 is expressed in heart, brain, liver, testis and hepatoma cells. Most tissues contain transcripts of multiple isoforms, however only isoform 5 is detected in heart and liver.

Involvement in disease

Defects in DMD are the cause of Duchenne muscular dystrophy (DMD) [MIM:310200]. DMD is the most common form of muscular dystrophy; a sex-linked recessive disorder. It typically presents in boys aged 3 to 7 year as proximal muscle weakness causing waddling gait, toe-walking, lordosis, frequent falls, and difficulty in standing up and climbing up stairs. The pelvic girdle is affected first, then the shoulder girdle. Progression is steady and most patients are confined to a wheelchair by age of 10 or 12. Flexion contractures and scoliosis ultimately occur. About 50% of patients have a lower IQ than their genetic expectations would suggest. There is no treatment.

Defects in DMD are the cause of Becker muscular dystrophy (BMD) [MIM:300376]. BMD resembles DMD in hereditary and clinical features but is later in onset and more benign. Defects in DMD are a cause of cardiomyopathy dilated X-linked type 3B (CMD3B) [MIM:302045]; also known as X-linked dilated cardiomyopathy (XLCM). 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.

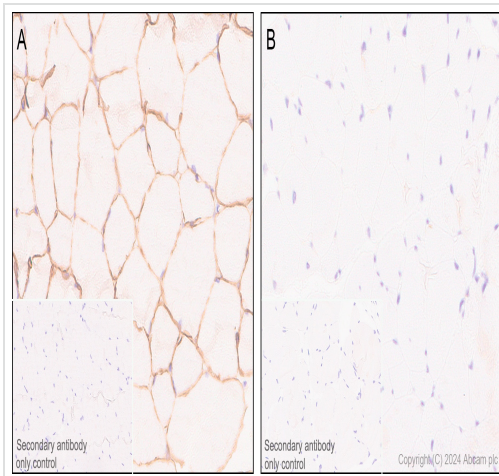
Sequence similarities

Contains 2 CH (calponin-homology) domains.
Contains 22 spectrin repeats.
Contains 1 WW domain.
Contains 1 ZZ-type zinc finger.

Cellular localization

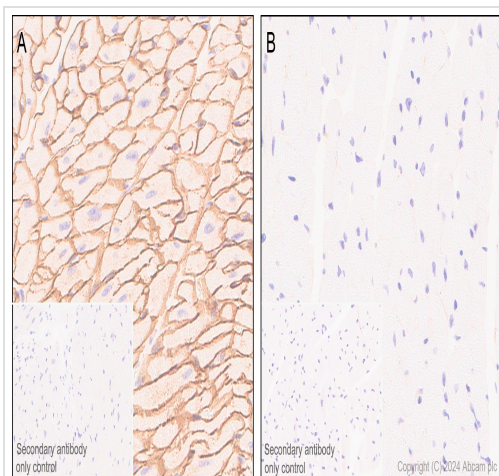
Cell membrane > sarcolemma. Cytoplasm > cytoskeleton.

Images



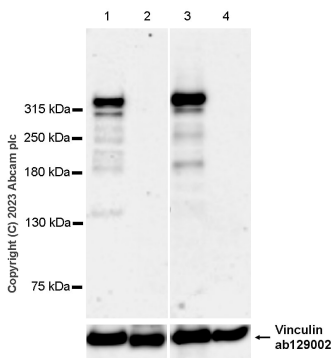
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical analysis of paraffin-embedded (A) Skeletal muscle tissue from wild-type C57BL/6JGpt mice (B) Skeletal muscle tissue from DMD knockout mice staining with ab218198 at 1/5000 dilution and ready-to-use Goat Anti-Rabbit IgG H&L (HRP) secondary. Counterstaining with hematoxylin. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins. Positive staining on (A) Skeletal muscle tissue from wild-type C57BL/6JGpt mice and no staining on (B) Skeletal muscle tissue from DMD knockout mice. The section was incubated with ab218198 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND™ RX instrument. The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and DMD-KO homozygous mice (Strain ID: T003035). The tissue samples were kindly provided by GemPharmatech. C57BL/6JGpt wildtype mice and DMD-KO homozygous mice (Strain ID: T003035).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

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Western blot - Anti-Dystrophin antibody [EPR21189] (ab218198)

All lanes : Anti-Dystrophin antibody [EPR21189] (ab218198) at 1/1000 dilution

Lane 1 : Mouse heart tissue lysate

Lane 2 : Mouse liver tissue lysate

Lane 3 : Rat heart tissue lysate

Lane 4 : Rat liver tissue lysate

Lysates/proteins at 20 μ g per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 427 kDa

Observed band size: 425 kDa

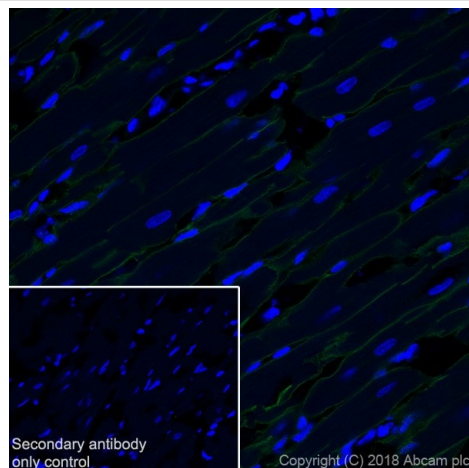
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

Exposure time: Lane 1-2: 180 seconds; Lane 3-4: 81 seconds.

Negative control: mouse liver and rat liver.

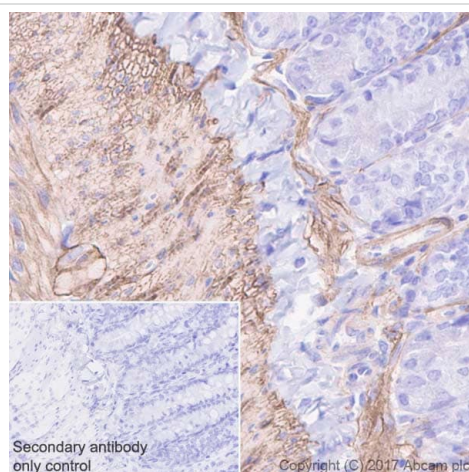
In Western blot, anti-Vinculin antibody (**ab129002**) staining at 1/10,000 dilution.

Samples are non-boiled as boiling may cause protein aggregation.



Immunohistochemistry (Frozen sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical (Frozen sections) analysis of rat heart tissue using ab218198 (1/50 dilution) to stain Dystrophin. **ab150077** AlexaFluor®488 Goat anti-Rabbit (1/500) secondary used. DAPI used as a nuclear counter stain. Heat-mediated antigen retrieval using **ab94681** (Tris/EDTA buffer, pH 9.0). Fixative 4% PFA, Permeabilisation with 0.2% Triton X-100.

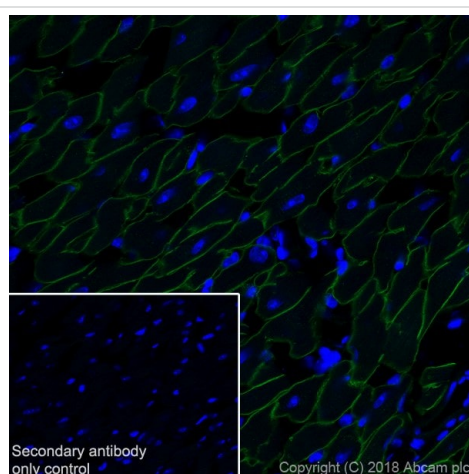


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical analysis of paraffin-embedded rat colon tissue labeling Dystrophin with ab218198 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous and cytoplasmic staining in smooth muscle of rat colon (PMID: 18806224) is observed. Counter stained with Hematoxylin.

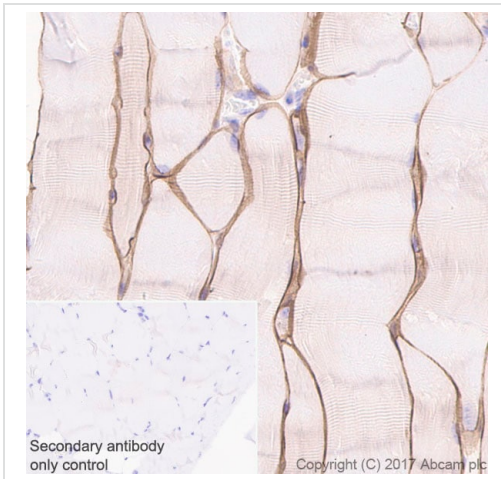
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat-mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Immunohistochemistry (Frozen sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical (Frozen sections) analysis of mouse heart tissue using ab218198 (1/50 dilution) to stain Dystrophin. **ab150077** AlexaFluor®488 Goat anti-Rabbit (1/500) secondary used. DAPI used as a nuclear counter stain. Heat-mediated antigen retrieval using **ab94681** (Tris/EDTA buffer, pH 9.0). Fixative 4% PFA, Permeabilisation with 0.2% Triton X-100.

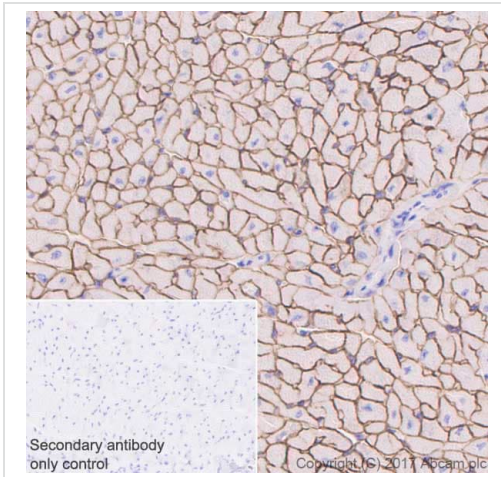


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical analysis of paraffin-embedded mouse skeletal muscle tissue labeling Dystrophin with ab218198 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous staining on mouse skeletal muscle (PMID: 24793134) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat-mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Dystrophin antibody [EPR21189] (ab218198)

Immunohistochemical analysis of paraffin-embedded mouse cardiac muscle tissue labeling Dystrophin with ab218198 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) Ready to use. Membranous staining on mouse cardiac muscle (PMID: 24793134) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) Ready to use.

Perform heat-mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).

Why choose a recombinant antibody?



Research with confidence
Consistent and reproducible results



Long-term and scalable supply
Recombinant technology



Success from the first experiment
Confirmed specificity



Ethical standards compliant
Animal-free production

Anti-Dystrophin antibody [EPR21189] (ab218198)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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