abcam

Product datasheet

Anti-ITGA7 antibody [3C12] ab195959

2 References 2 Images

Overview

Product name	Anti-ITGA7 antibody [3C12]
Description	Mouse monoclonal [3C12] to ITGA7
Host species	Mouse
Tested applications	**Suitable for:** Flow Cyt, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Tissue, cells or virus corresponding to Mouse ITGA7. ab195959 was raised against Mouse myoblasts.
Positive control	Human brain, cortex tissue; C2C12 cells.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

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	Constituents: 50% Glycerol (glycerin, glycerine), 50% PBS
Purity	Protein A purified
Clonality	Monoclonal
Clone number	3C12
Isotype	IgG1

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab195959 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
Flow Cyt		Use a concentration of 10 - 20 µg/ml. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IHC-P		Use a concentration of 10 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function

Integrin alpha-7/beta-1 is the primary laminin receptor on skeletal myoblasts and adult myofibers. During myogenic differentiation, it may induce changes in the shape and mobility of myoblasts, and facilitate their localization at laminin-rich sites of secondary fiber formation. It is involved in the maintenance of the myofibers cytoarchitecture as well as for their anchorage, viability and functional integrity. Isoform Alpha-7X2B and isoform Alpha-7X1B promote myoblast migration on laminin 1 and laminin 2/4, but isoform Alpha-7X1B is less active on laminin 1 (In vitro). Acts as Schwann cell receptor for laminin-2. Acts as a receptor of COMP and mediates its effect on vascular smooth muscle cells (VSMCs) maturation (By similarity). Required to promote contractile phenotype acquisition in differentiated airway smooth muscle (ASM) cells.

Tissue specificity

Isoforms containing segment A are predominantly expressed in skeletal muscle. Isoforms containing segment B are abundantly expressed in skeletal muscle, moderately in cardiac muscle, small intestine, colon, ovary and prostate and weakly in lung and testes. Isoforms containing segment X2D are expressed at low levels in fetal and adult skeletal muscle and in cardiac muscle, but are not detected in myoblasts and myotubes. In muscle fibers isoforms containing segment A and B are expressed at myotendinous and neuromuscular junctions; isoforms containing segment C are expressed at neuromuscular junctions and at extrasynaptic sites. Isoforms containing segments X1 or X2 or, at low levels, X1X2 are expressed in fetal and adult skeletal muscle (myoblasts and myotubes) and cardiac muscle.

Involvement in disease

Defects in ITGA7 are the cause of muscular dystrophy congenital due to integrin alpha-7 deficiency (MDCI) [MIM:613204]. A form of congenital muscular dystrophy. Patients present at birth, or within the first few months of life, with hypotonia, muscle weakness and often with joint contractures.

Sequence similarities

Belongs to the integrin alpha chain family.
Contains 7 FG-GAP repeats.

Developmental stage

In renewing intestinal epithelium, expression of isoforms containing segment B correlates with the onset of enterocytic differentiation.

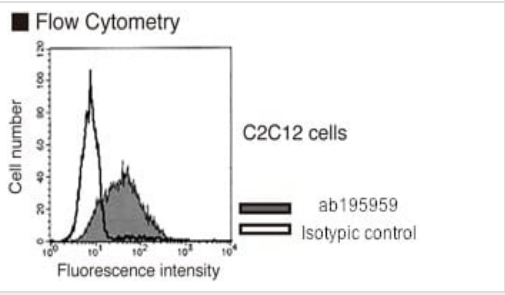
Post-translational modifications

ADP-ribosylated on at least two sites of the extracellular domain in skeletal myotubes.
A 70 kDa form is created by proteolytic cleavage. Cleavage is elevated during myogenic differentiation and the cleaved form enhances cell adhesion and spreading on laminin.

Cellular localization

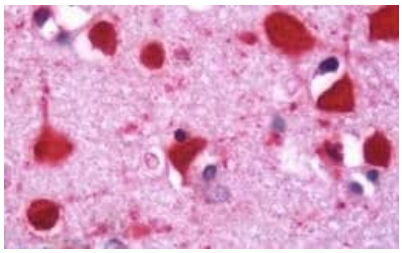
Membrane.

Images



Flow Cytometry - Anti-ITGA7 antibody [3C12] (ab195959)

Flow Cytometrical analysis of C2C12 cells labeling ITGA7 with ab195959 at 20 µg or an isotypic control.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ITGA7 antibody [3C12] (ab195959)

Immunohistochemical analysis of formalin-fixed, paraffin-embedded human brain, cortex tissue labeling ITGA7 with ab195959 at 10 µg/mL.

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