

Product name:	Cleaved-Integrin $\alpha 7$ LC (E959) Rabbit Polyclonal Antibody
Cat number:	ABN08997
Conjugate:	Unconjugated
Size:	100 μ L
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human ITGA7. AA range:940-989
Reactivity:	Human,Monkey
Applications:	WB 1:500-1:2000,ELISA 1:20000-1:40000
Molecular Weight:	25kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

integrin subunit alpha 7 (ITGA7) Homo sapiens The protein encoded by this gene belongs to the integrin alpha chain family. Integrins are heterodimeric integral membrane proteins composed of an alpha chain and a beta chain. They mediate a wide spectrum of cell-cell and cell-matrix interactions, and thus play a role in cell migration, morphologic development, differentiation, and metastasis. This protein functions as a receptor for the basement membrane protein laminin-1. It is mainly expressed in skeletal and cardiac muscles and may be involved in differentiation and migration processes during myogenesis. Defects in this gene are associated with congenital myopathy. Alternatively spliced transcript variants encoding different isoforms have been noted for this gene. [provided by RefSeq, Feb 2009], alternative products: Additional isoforms seem to exist. There is a combination of at least five alternatively spliced domains, three extracellular (X1, X2 and D) and two cytoplasmic (A and B). A third potential alternatively spliced cytoplasmic domain (C) does not appear to be expressed. In vitro generated isoform X2C shows function. So far detected are isoform Alpha-7X1A, isoform Alpha-7X2B (major), isoform Alpha-7X2DB (minor) and minor isoforms containing segment X1X2. Experimental confirmation may be lacking for some isoforms, developmental stage: In renewing intestinal epithelium, expression of isoforms containing segment B correlates with the onset of enterocytic differentiation., disease: Defects in ITGA7 are associated with a form of congenital myopathy; a group of heterogeneous muscle disorders which are thought to result from abnormal muscle development. Muscle weakness is either non-progressive or slowly progressive and apparent from birth or early infancy., 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), PTM: ADP-ribosylated on at least two sites of the extracellular domain in skeletal myotubes., similarity: Belongs to the integrin alpha chain family., similarity: Contains 7 FG-GAP repeats., subunit: Heterodimer of an alpha and a beta subunit. The alpha subunit is composed of an heavy and a light chain linked by a disulfide bond. Alpha-7 associates with beta-1., 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.,