Datasheet for ABIN1107039

anti-Dystroglycan antibody

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Overview

Quantity:	0.1 mg
Target:	Dystroglycan (DAG1)
Reactivity:	Human, Mouse, Rat, Cow, Rabbit
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This Dystroglycan antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Enzyme Immunoassay (EIA)

Product Details

Clone:	2238
Isotype:	IgG2b
Specificity:	This antibody is specific for a glycoepitope on brain bovine alpha-dystroglycan, which is absent on alpha-dystroglycan expressed in all other tissues.
Cross-Reactivity (Details):	Species reactivity (tested):Human, mouse, rat, rabbit, bovine
Purification:	Protein G purified

Target Details

Target:	Dystroglycan (DAG1)
Alternative Name:	Dystroglycan (DAG1 Products)

Target Details

Background:	Alpha-dystroglycan (alpha-DG), also known as dystrophin-associated glycoprotein, is a laminin-binding protein of ~156 kDa (including glyco-groups). Alpha-DG is a component of the dystroglycan complex, which is involved in early development, morphogenesis and in the pathogenesis of muscular dystrophies. Alpha- and beta-DG are encoded by a single gene and are derived from a precursor polypeptide by posttranslational cleavage. Beta-DG is an integral membrane protein, whereas alpha-DG is membrane-associated through its noncovalent interaction with the extracellular domain of beta-DG. The alpha- and beta-DGs provide important physical linkages between components of basement membranes and cytoplasmic proteins that bind to the actin cytoskeleton. Alpha-DG is a heavily glycosylated, mucin-like protein anchored on the extracellular surface of the myotube, where it may provide linkage between the sarcolemma and extracellular matrix (ECM). Alpha-DG is expressed in a variety of fetal and adult tissues. Tissue-specific glycosylation modifies the laminin specificity of alpha-DG. The muscle and nonmuscle isoforms of dystroglycan differ by carbohydrate moieties but not protein sequence. Alpha-DG has been shown to colocalize with laminin in skeletal and cardiac muscle and a number of other cells including peripheral nerve, astrocytes, Purkinje neurons and kidney epithelium. Laminin-10/11 was shown to bind preferentially to brain alpha-DG. In Duchenne muscular dystrophy, the expression of alpha-DG is dramatically reduced leading to a loss of linkage between the sarcolemma and extracellular matrix, rendering muscle fibers more susceptible to necrosis. In the central nervous system, dystroglycan functions as a dual receptor for agrin and laminin-2 for instance in the Schwann cell membrane. Furthermore, defects in dystroglycan are central to the pathogenesis of structural and functional brain abnormalities seen in congenital muscular dystrophies (CMD).Synonyms: DAG1, Dystrophin-associated glycoprotein 1
Gene ID:	281439
NCBI Accession:	NP_776587
UniProt:	O18738
Pathways:	Maintenance of Protein Location, Regulation of Carbohydrate Metabolic Process, Protein targeting to Nucleus

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

Concentration:	0.1 mg/mL
Buffer:	PBS, 0.02 % sodium azide, 0.1 % bovine serum albumin
Preservative:	Sodium azide
Precaution of Use:	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C
Storage Comment:	Store at 2 - 8 °C.