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Product datasheet for AM26155PU-N

DAG1 Mouse Monoclonal Antibody [Clone ID: 2238]

Product data:

Product Type:	Primary Antibodies
Clone Name:	2238
Applications:	ELISA, IHC, WB
Recommended Dilution:	Immunoassay (1:50 as starting dilution). Western blot (1:50 as starting dilution). Immunohistochemistry on paraffin sections (1:50 as starting dilution).
Reactivity:	Bovine, Human, Mouse, Rabbit, Rat
Host:	Mouse
Isotype:	IgG2b
Clonality:	Monoclonal
Specificity:	This antibody is specific for a glycoepitope on brain bovine alpha-dystroglycan, which is absent on alpha-dystroglycan expressed in all other tissues.
Formulation:	PBS State: Purified State: Liquid 0.2 µm filtered Ig fraction Stabilizer: 0.1% bovine serum albumin Preservative: 0.02% sodium azide
Concentration:	lot specific
Purification:	Protein G purified
Conjugation:	Unconjugated
Storage:	Store at 2 - 8 °C.
Stability:	Shelf life: one year from despatch.
Database Link:	Entrez Gene 281439 Bovine O18738

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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