

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Alpha-Dystroglycan, Bovine, clone 2238		
Catalog number	HM5010		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	Concentration	100 µg/ml
Host Species	Mouse IgG2b	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes		•				•		•
No								
N.D.	•		•	•	•		•	

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- W: it recognizes alpha-DG as protein of ~130 kD, especially after enrichment of the lysates for dystroglycans.

General Information

Description	Monoclonal antibody 2238 recognizes a glycoepitope unique to brain alpha-dystroglycan. 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). The monoclonal antibody 2238 is specific for a glycoepitope on brain bovine alpha-dystroglycan, which is absent on alpha-dystroglycan expressed in all other tissues.
Aliases	Alpha-DG, Dystrophin-associated glycoprotein 1 (DAG1)
Cross reactivity	Rabbit: Yes; Mouse: Yes; Rat: Yes Human: Yes
References	1. McDearmon E et al; Brain alpha-dystroglycan displays unique glycoepitopes and preferential binding to laminin-10/11. FEBS Letters 2006, 580: 3381
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Robbert Zwinkels

Date
16/03/2018

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.