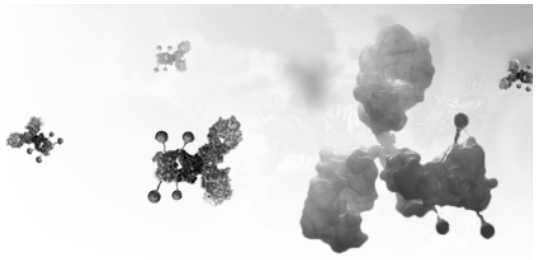

Rat Anti-DAG1 monoclonal antibody, clone 4E8 (CABT-RM156)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Specificity	Detects human and murine alpha-dystroglycan. It targets an epitope within the C-terminal region.
Target	DAG1
Immunogen	Murine alpha-dystroglycan-Fc-Fusion protein.
Isotype	IgG2a, κ
Source/Host	Rat
Species Reactivity	Mouse, Human
Clone	4E8
Purification	Protein G purified
Conjugate	unconjugated
Applications	WB
Molecular Weight	~ 97 kDa observed; 96.91 kDa calculated. Uncharacterized bands may be observed in some lysate(s).
Format	Liquid
Size	100 µg
Buffer	0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl
Preservative	0.05% sodium azide

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Storage	Stable for 1 year at 2-8°C from date of receipt.

BACKGROUND

Introduction	Dystroglycan is encoded by the Dag1 gene in murine species. Dystroglycan is a component of the dystrophin glycoprotein complex that links the extracellular matrix to the intracellular actin cytoskeleton. It is synthesized with a signal peptide (aa 1-27) that is subsequently cleaved off to generate the mature protein that is further autolytically cleaved (between 651-652) to produce alpha-dystroglycan (aa 28-651) and beta-dystroglycan (aa 652-893). Alpha-dystroglycan is an extracellular peripheral glycoprotein that binds to several extracellular matrix and synaptic proteins such as laminin, agrin, neurexin, and pikachurin. It is reported that its O-mannosyl glycosylation is required for its ligand-binding functions. Beta-dystroglycan is a single-pass type 1 transmembrane protein that plays important roles in connecting the extracellular matrix to the cytoskeleton and serves as a cell adhesion receptor in both muscle and non-muscle tissues. In the cell, beta-dystroglycan binds to dystrophin that is linked to actin cytoskeleton. Hence, alpha/beta dystroglycans act as a molecular axis connecting extracellular matrix with the cytoskeleton across the plasma membrane. Defects in O-mannosyl glycan have been linked to various congenital muscular dystrophies caused by aberrant alpha-dystroglycan glycosylation.
Keywords	DAG1; dystroglycan 1 (dystrophin-associated glycoprotein 1); A3a; DAG; AGRNR; 156DAG; MDDGC7; MDDGC9; dystroglycan

GENE INFORMATION

Entrez Gene ID	13138
UniProt ID	Q62165

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