

[KO]beta Dystroglycan Rabbit mAb

Catalog # AP76408

Product Information

Application	WB
Primary Accession	Q14118
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	97441

Additional Information

Gene ID	1605
Other Names	DAG1
Dilution	WB~~1:500-1:1000
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	DAG1 (HGNC:2666)
Function	The dystroglycan complex is involved in a number of signaling events and processes including laminin deposition and extracellular matrix assembly, acetylcholine receptor clustering, sarcolemmal stability, cell survival, peripheral nerve myelination, nodal structure, cell migration, epithelial polarization, and epithelium branching morphogenesis (By similarity). Required for the formation of photoreceptor ribbon synapses, and long-term maintenance of inhibitory synapses in cerebellar Purkinje cells (By similarity). Also involved in the positive regulation of cartilage formation through agrin (AGRN) binding and up-regulation of SOX9, a transcription factor that plays a key role in chondrocytes differentiation (PubMed:26290588). [Beta-dystroglycan]: Transmembrane protein that plays important roles in connecting the extracellular matrix to the cytoskeleton. Acts as a cell adhesion receptor in both muscle and non- muscle tissues. Receptor for both DMD and UTRN and, through these interactions, scaffolds axin to the cytoskeleton. Also functions in cell adhesion-mediated signaling and implicated in cell polarity.

Cellular Location	[Alpha-dystroglycan]: Secreted, extracellular space. Secreted, extracellular space, extracellular matrix, basement membrane {ECO:0000250 UniProtKB:Q62165} Synapse {ECO:0000250 UniProtKB:Q62165}. Note=Localized to inhibitory synapses in the cerebellar cortex. {ECO:0000250 UniProtKB:Q62165}
Tissue Location	Expressed in a variety of fetal and adult tissues. In epidermal tissue, located to the basement membrane. Also expressed in keratinocytes and fibroblasts.

Background

Dystroglycan, also known as DAG1 or DG, was originally isolated from skeletal muscle as an integral membrane component of the dystrophin-glycoprotein complex (DGC). In addition to skeletal muscle, dystroglycan is strongly expressed in heart and smooth muscle, as well as many non-muscle tissues including brain and peripheral nerve (PMID: 12556455). The dystroglycan is involved in a number of processes including laminin and basement membrane assembly, sarcolemmal stability, cell survival, peripheral nerve myelination, nodal structure, cell migration, and epithelial polarization. Dystroglycan consists of two subunits (alpha and beta), which are translated from a single mRNA as a propeptide that is proteolytically cleaved into two noncovalently associated proteins (PMID: 16410545). Alpha-dystroglycan is a 156-kDa extracellular peripheral glycoprotein, while beta-dystroglycan is a 43-kDa transmembrane protein (PMID: 9858474). The 43-kDa beta-dystroglycan can be cleaved into a ~30-kDa form (PMID: 14678802; 18458097; 17255331).

Images



Western blot analysis of beta Dystroglycan in MCF-7, HepG2, Lncap lysates using beta Dystroglycan antibody.

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