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FKTN / Fukutin Antibody
Rabbit Polyclonal Antibody
Catalog # ALS13654

Specification

FKTN / Fukutin Antibody - Product Information

Application	**IF, WB, IHC**
Primary Accession	O75072
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**54kDa KDa**

FKTN / Fukutin Antibody - Additional Information

Gene ID 2218

Other Names
Fukutin, 2.-.-.-, Fukuyama-type congenital muscular dystrophy protein, FKTN, FCMD

Target/Specificity
Human Fukutin. Predicted cross-reactivity based on amino acid sequence homology: mouse (90%), rat (91%).

Reconstitution & Storage
Aliquot and store at -20°C. Minimize freezing and thawing.

Precautions
FKTN / Fukutin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

FKTN / Fukutin Antibody - Protein Information

Name FKTN (HGNC:3622)

Function
Catalyzes the transfer of a ribitol-phosphate from CDP- ribitol to the distal N-acetylgalactosamine of the phosphorylated O- mannosyl trisaccharide (N-acetylgalactosamine-beta-3-N-acetylglucosamine-beta-4-(phosphate-6-)mannose), a carbohydrate structure present in alpha-dystroglycan (DAG1) (PubMed:26923585, PubMed:29477842, PubMed:27194101). This constitutes the first step in the formation of the ribitol 5-phosphate tandem repeat which links the phosphorylated O-mannosyl trisaccharide to the ligand binding moiety composed of repeats of 3-xylosyl-alpha-1,3-glucuronic acid-beta-1 (PubMed:17034757, PubMed:25279699, PubMed:26923585, PubMed:<a

href="http://www.uniprot.org/citations/29477842" target="_blank">29477842, PubMed:27194101). Required for normal location of POMGNT1 in Golgi membranes, and for normal POMGNT1 activity (PubMed:17034757). May interact with and reinforce a large complex encompassing the outside and inside of muscle membranes (PubMed:25279699). Could be involved in brain development (Probable).

Cellular Location
Golgi apparatus membrane; Single-pass type II membrane protein. Cytoplasm {ECO:0000250|UniProtKB:Q8R507}. Nucleus {ECO:0000250|UniProtKB:Q8R507}. Note=In retinal tissue, does not localize with the Golgi apparatus. {ECO:0000250|UniProtKB:Q8R507}

Tissue Location
Expressed in the retina (at protein level) (PubMed:29416295). Widely expressed with highest expression in brain, heart, pancreas and skeletal muscle (PubMed:11115853). Expressed at similar levels in control fetal and adult brain (PubMed:11115853) Expressed in migrating neurons, including Cajar-Retzius cells and adult cortical neurons, as well as hippocampal pyramidal cells and cerebellar Purkinje cells (PubMed:11115853). No expression observed in the glia limitans, the subpial astrocytes (which contribute to basement membrane formation) or other glial cells (PubMed:11115853)

Volume
50 µl

FKTN / Fukutin Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

FKTN / Fukutin Antibody - Images

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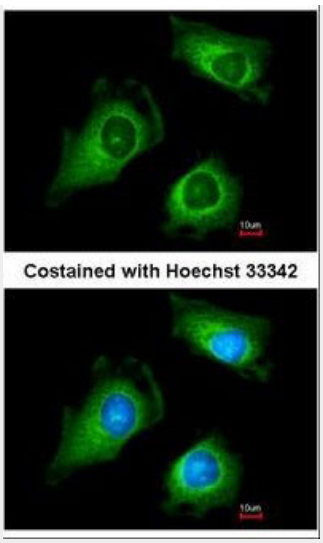
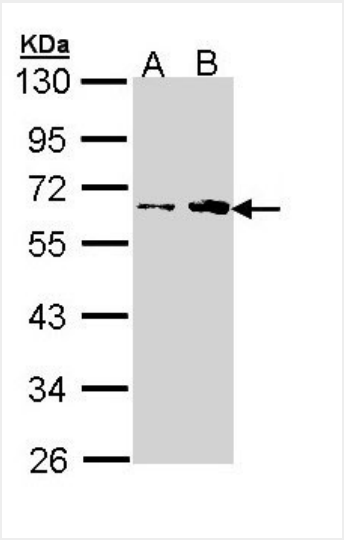
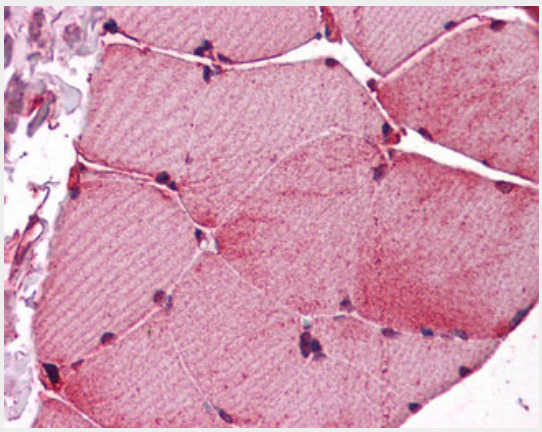


Immunofluorescence of methanol-fixed HeLa, using Fukutin antibody at 1:200 dilution.



Sample (30 ug of whole cell lysate).



Anti-FKTN / Fukutin antibody IHC of human skeletal muscle.

FKTN / Fukutin Antibody - Background

Glycosyltransferase involved in the biosynthesis of the phosphorylated O-mannosyl trisaccharide

(N-acetylgalactosamine- beta-3-N-acetylglucosamine-beta-4-(phosphate-6-)mannose), a carbohydrate structure present in alpha-dystroglycan (DAG1), which is required for binding laminin G-like domain-containing extracellular proteins with high affinity. May interact with and reinforce a large complex encompassing the outside and inside of muscle membranes. Could be involved in brain development.

FKTN / Fukutin Antibody - References

Kobayashi K.,et al.Nature 394:388-392(1998).
Kobayashi K.,et al.FEBS Lett. 489:192-196(2001).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Humphray S.J.,et al.Nature 429:369-374(2004).
Saito K.,et al.Am. J. Med. Genet. 92:184-190(2000).