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LARGE Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP21980c

Product Information

Application	WB, E
Primary Accession	O95461
Other Accession	Q66PG4, Q66PG1, Q8N3Y3, Q66PG3, Q66PG2, Q9Z1M7
Reactivity	Human, Mouse
Predicted	Chicken, Human, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Clone Names	RB55257
Calculated MW	88066

Additional Information

Gene ID	9215
Other Names	Glycosyltransferase-like protein LARGE1, 2.4.-.-, Acetylglucosaminyltransferase-like 1A, Xylosyltransferase LARGE, 2.4.2.-, Beta-1, 3-glucuronyltransferase LARGE, 2.4.1.-, LARGE, KIAA0609, LARGE1
Target/Specificity	This LARGE antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 365-398 amino acids from the Central region of human LARGE.
Dilution	WB~~1:2000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	LARGE Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	LARGE1 (HGNC:6511)
Synonyms	KIAA0609, LARGE

Function	Bifunctional glycosyltransferase with both alpha-1,3- xylosyltransferase and beta-1,3-glucuronyltransferase activities involved in the maturation of alpha-dystroglycan (DAG1) by glycosylation leading to DAG1 binding to laminin G-like domain- containing extracellular proteins with high affinity (PubMed:15661757, PubMed:15752776, PubMed:21987822, PubMed:22223806, PubMed:23125099, PubMed:25279697, PubMed:25279699). Elongates the glucuronyl-beta-1,4- xylose-beta disaccharide primer structure initiated by B4GAT1 by adding repeating units [-3-Xylose-alpha-1,3-GlcA-beta-1-] to produce a heteropolysaccharide (PubMed:22223806, PubMed:23125099, PubMed:25138275, PubMed:25279697, PubMed:25279699, PubMed:32975514). Requires the phosphorylation of core M3 (O-mannosyl trisaccharide) by POMK to elongate the glucuronyl-beta-1,4-xylose-beta disaccharide primer (PubMed:21987822). Plays a key role in skeletal muscle function and regeneration (By similarity).
Cellular Location	Golgi apparatus membrane; Single-pass type II membrane protein
Tissue Location	Ubiquitous. Highest expression in heart, brain and skeletal muscle.

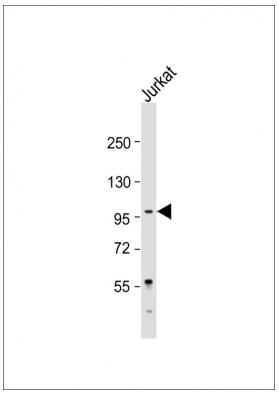
Background

Bifunctional glycosyltransferase with both xylosyltransferase and beta-1,3-glucuronyltransferase activities 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) (PubMed:22223806). Phosphorylated O- mannosyl trisaccharid is required for binding laminin G-like domain-containing extracellular proteins with high affinity and plays a key role in skeletal muscle function and regeneration. LARGE elongates the glucuronyl-beta-1,4-xylose-beta disaccharide primer structure initiated by B3GNT1/B4GAT1 by adding repeating units [-3-Xylose-alpha-1,3-GlcA-beta-1-] to produce a heteropolysaccharide (PubMed:25279699).

References

Peyrard M.,et al.Proc. Natl. Acad. Sci. U.S.A. 96:598-603(1999).
Nagase T.,et al.DNA Res. 5:31-39(1998).
Collins J.E.,et al.Genome Biol. 5:R84.1-R84.11(2004).
Dunham I.,et al.Nature 402:489-495(1999).
Fujimura K.,et al.Biochem. Biophys. Res. Commun. 329:1162-1171(2005).

Images



Anti-LARGE Antibody (Center) at 1:2000 dilution + Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 88 kDa Blocking/Dilution buffer: 5% NFDM/TBST.