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LARGE Blocking Peptide (Center)

Synthetic peptide
Catalog # BP21980c

Specification

LARGE Blocking Peptide (Center) - Product Information

Primary Accession	Q95461
Other Accession	Q66PG4, Q66PG1, Q8N3Y3, Q66PG3, Q66PG2, Q9Z1M7

LARGE Blocking Peptide (Center) - 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
The synthetic peptide sequence is selected from aa 385-398 of HUMAN LARGE

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LARGE Blocking Peptide (Center) - 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:22223806, PubMed:15752776, PubMed:15661757, PubMed:25279699, PubMed:25279697, PubMed:<a href="http://www.uniprot.org/citations/23125099"

target="_blank">23125099, PubMed:21987822). 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:25279699, PubMed:25279697, PubMed:25138275, PubMed:32975514, PubMed:23125099). 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.

LARGE Blocking Peptide (Center) - Protocols

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

- Blocking Peptides

LARGE Blocking Peptide (Center) - Images

LARGE Blocking Peptide (Center) - 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).

LARGE Blocking Peptide (Center) - 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).