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POFUT2 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP12857c

Product Information

Application	WB, IHC-P, E
Primary Accession	Q9Y2G5
Other Accession	NP_598368.2
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB32633
Calculated MW	49976
Antigen Region	228-257

Additional Information

Gene ID	23275
Other Names	GDP-fucose protein O-fucosyltransferase 2, Peptide-O-fucosyltransferase 2, O-FucT-2, POFUT2, C21orf80, FUT13, KIAA0958
Target/Specificity	This POFUT2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 228-257 amino acids from the Central region of human POFUT2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 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	POFUT2 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	POFUT2
Synonyms	C21orf80, FUT13, KIAA0958

Function	GDP-fucose protein O-fucosyltransferase involved in one of the two pathways responsible for protein O-linked fucosylation, a unique post-translational modification of cysteine-knotted proteins that regulates various biological functions. This pathway targets proteins with Thrombospondin type-1 (TSP1) repeats (TSR) in the endoplasmic reticulum. Catalyzes the reaction that attaches fucose through an O-glycosidic linkage to a conserved serine or threonine residue in the consensus sequence C1-X-X-S/T-C2 of thrombospondin type I repeats (TSRs) where C1 and C2 are the first and second cysteines of the repeat, respectively (PubMed:22588082). O-fucosylates members of several protein families including the ADAMTS, the thrombospondin (TSP) and spondin families (Probable) (PubMed:17395588). Required for the proper secretion of ADAMTS family members such as ADAMTSL1 and ADAMTS13 (PubMed:17395588, PubMed:17395589). The O-fucosylation of TSRs is also required for restricting epithelial to mesenchymal transition (EMT), maintaining the correct patterning of mesoderm and localization of the definite endoderm (By similarity).
Cellular Location	Endoplasmic reticulum. Golgi apparatus. Note=Mainly located in the endoplasmic reticulum.
Tissue Location	Isoform A is expressed in fetal liver and peripheral blood lymphocytes. Isoform B is expressed in spleen, lung, testis, bone marrow, thymus, pancreas, prostate, fetal brain, fetal liver and fetal kidney. Isoform C is expressed in brain, heart, spleen, liver, lung, stomach, testis, placenta, skin, thymus, pancreas, mammary gland, prostate, fetal brain, fetal liver and fetal heart

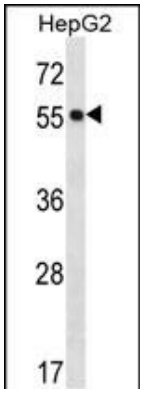
Background

Fucose is typically found as a terminal modification of branched chain glycoconjugates, but it also exists in direct O-linkage to serine or threonine residues within cystine knot motifs in epidermal growth factor (EGF; MIM 131530)-like repeats or thrombospondin (THBS; see MIM 188060) type-1 repeats. POFUT2 is an O-fucosyltransferase that use THBS type-1 repeats as substrates (Luo et al., 2006 [PubMed 16464857]).

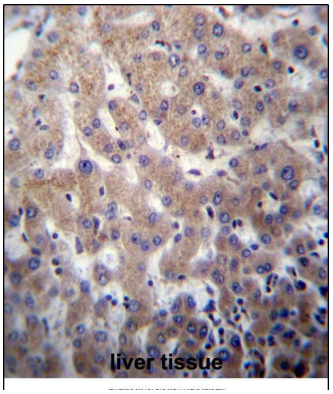
References

Feng, T., et al. Hum. Genet. 128(3):269-280(2010)
Luo, Y., et al. J. Biol. Chem. 281(14):9385-9392(2006)
Luo, Y., et al. J. Biol. Chem. 281(14):9393-9399(2006)
Menzel, O., et al. Genomics 84(2):320-330(2004)
Martinez-Duncker, I., et al. Glycobiology 13 (12), 1C-5C (2003) :

Images



POFUT2 Antibody (Center) (Cat. #AP12857c) western blot analysis in HepG2 cell line lysates (35ug/lane).This demonstrates the POFUT2 antibody detected the POFUT2 protein (arrow).



POFUT2 Antibody (Center) (Cat. #AP12857c)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of POFUT2 Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.