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Ceramide glucosyltransferase Rabbit pAb

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Catalog # AP52273

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q16739
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	44854
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human UGCG
Epitope Specificity	21-120/394
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Golgi apparatus membrane.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	bs-0701P is one synthetic peptide derived from human GCS. GCS (glucosylceramide synthase) may serve as a 'flippase' as well as a glucosyltransferase that transfers glucose to ceramide. Able to use UDP-galactose to synthesize galactosylceramide with 10% of efficiency with which it utilizes UDP-glucose. [Catalytic activity] UDP-glucose + N-acylsphingosine = UDP + D-glucosyl-N-acylsphingosine. Lipid metabolism; sphingolipid metabolism. [Subcellular location] Endoplasmic reticulum membrane; Multi-pass membrane protein. Belongs to the glycosyltransferase 2 family.

Additional Information

Gene ID	7357
Other Names	Ceramide glucosyltransferase, 2.4.1.80, GLCT-1, Glucosylceramide synthase, GCS, Glycosylceramide synthase, UDP-glucose ceramide glucosyltransferase, UDP-glucose:N-acylsphingosine D-glucosyltransferase, UGCG (HGNC:12524)
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1 □g/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	UGCG (HGNC:12524)
Function	Participates in the initial step of the glucosylceramide- based glycosphingolipid/GSL synthetic pathway at the cytosolic surface of the Golgi (PubMed:1532799, PubMed:8643456). Catalyzes the transfer of glucose from UDP-glucose to ceramide to produce glucosylceramide/GlcCer (such as beta-D-glucosyl-(11')-N-acylsphing- 4-enine) (PubMed:1532799, PubMed:8643456). GlcCer is the core component of glycosphingolipids/GSLs, amphipathic molecules consisting of a ceramide lipid moiety embedded in the outer leaflet of the membrane, linked to one of hundreds of different externally oriented oligosaccharide structures (PubMed:8643456). Glycosphingolipids are essential components of membrane microdomains that mediate membrane trafficking and signal transduction, implicated in many fundamental cellular processes, including growth, differentiation, migration, morphogenesis, cell-to-cell and cell-to-matrix interactions (By similarity). They are required for instance in the proper development and functioning of the nervous system (By similarity). As an example of their role in signal transduction, they regulate the leptin receptor/LEPR in the leptin-mediated signaling pathway (By similarity). They also play an important role in the establishment of the skin barrier regulating keratinocyte differentiation and the proper assembly of the cornified envelope (By similarity). The biosynthesis of GSLs is also required for the proper intestinal endocytic uptake of nutritional lipids (By similarity). Catalyzes the synthesis of xylosylceramide/XylCer (such as beta-D-xylosyl-(11')-N-acylsphing-4- enine) using UDP-Xyl as xylose donor (PubMed:33361282).
Cellular Location	Golgi apparatus membrane; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q9R0E0}
Tissue Location	Found in all tissues examined.

Background

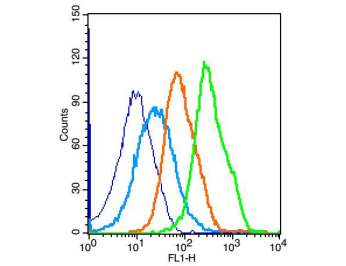
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References

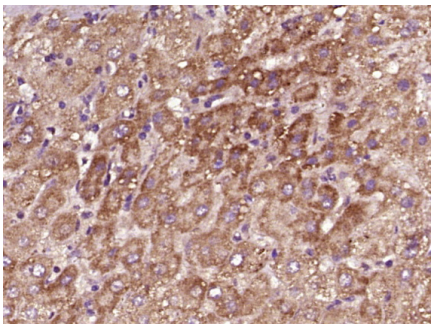
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Ichikawa S.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:12654-12654(1996).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Humphray S.J.,et al.Nature 429:369-374(2004).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

Images

Blank control: mouse splenocytes(blue)
Isotype Control Antibody: Rabbit IgG(orange) ;
Secondary Antibody: Goat anti-rabbit IgG-FITC(white blue),
Dilution: 1:100 in 1 X PBS containing 0.5% BSA ;
Primary Antibody Dilution: 1 µl in 100 µL1X PBS containing 0.5% BSA(green).



Key	Name	Parameter	Gate
	(mo)Splenocyte-blank.036	FL1-H	G1
	bs-0295G-FITC-(mo)Sp#1E5870.037	FL1-H	G1
	bs-0295P-(FITC)-(mo)#1E5874.038	FL1-H	G1
	bs-0701R-(FITC)-(mo)#1E5879.043	FL1-H	G1



Paraformaldehyde-fixed, paraffin embedded (Human liver cancer); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (Ceramide glucosyltransferase) Polyclonal Antibody, Unconjugated (AP52273) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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