10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Fat Free Antibody

Catalog # ASC11526

Product Information

Application	WB, E
Primary Accession	Q9UID3
Other Accession	NP_037397, 8393009
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	86042
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Fat Free antibody can be used for detection of Fat Free by Western blot at 1 g/mL.

Additional Information

Gene ID	738
Other Names	Vacuolar protein sorting-associated protein 51 homolog, Another new gene 2 protein, Protein fat-free homolog, VPS51, ANG2, C11orf2, C11orf3, FFR
Target/Specificity	C11orf2; At least two alternatively spliced isoforms are known to exist; this antibody will detect both isoforms.
Reconstitution & Storage	Fat Free antibody can be stored at 4°C for three months and -20°C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Fat Free Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	VPS51
Synonyms	ANG2, C11orf2, C11orf3, FFR
Function	Acts as a component of the GARP complex that is involved in retrograde transport from early and late endosomes to the trans-Golgi network (TGN). The GARP complex is required for the maintenance of protein retrieval from endosomes to the TGN, acid hydrolase sorting, lysosome function, endosomal cholesterol traffic and autophagy. VPS51 participates in retrograde transport of acid hydrolase receptors, likely by promoting tethering and SNARE-dependent fusion of endosome- derived carriers to the TGN

	(PubMed:20685960). Acts as a component of the EARP complex that is involved in endocytic recycling. The EARP complex associates with Rab4-positive endosomes and promotes recycling of internalized transferrin receptor (TFRC) to the plasma membrane (PubMed:25799061).
Cellular Location	Golgi apparatus, trans-Golgi network. Recycling endosome. Note=Localizes to the trans-Golgi network as part of the GARP complex, while it localizes to recycling endosomes as part of the EARP complex (PubMed:25799061)

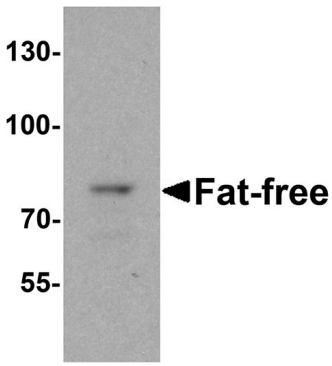
Background

Fat Free Antibody: Fat Free, also known as ANG2, was identified though a yeast two-hybrid screen using VP53. It is thought to be a structural and functional homolog of the yeast protein VPS51, a protein that together with VPS52, VPS53, and VPS54 form the Golgi-associated retrograde protein (GARP) complex that mediates the tethering and fusion of endosome-derived transport carriers to the trans-Golgi network (TGN). Similar to depletion of any of the VPS52, VPS53, or VPS54, depletion of Fat Free using RNAi impairs protein retrieval to the TGN indicating that Fat Free is missing component of the GARP complex in most eukaryotes.

References

Perez-Victoria FJ, Schindler C, Magadan JG, et al. Ang2/Fat Free is a conserved subunit of the Golgi-associated retrograde protein complex. Mol. Biol. Cell 2010; 21:3386-95
Ho SY, Lorent K, Pack M, et al. Zebrafish Fat Free is required for intestinal lipid absorption and Golgi apparatus structure. Cell Metab. 2006; 3:289-300.
Perez-Victoria FJ, Mardones GA, and Bonifacino JS. Requirement of the human GARP complex for mannose 6-phosphate-receptor-dependent sorting of cathepsin D to lysosomes. Mol. Biol. Cell 2008; 19:2350-62
Stafford RL, Ear J, Knight MJ, et al. The molecular basis of the Caskin1 and Mint1 interaction with CASK. J. Mol. Biol. 2011; 412:3-13.

Images



Western blot analysis of Fat Free in mouse brain tissue lysate with Fat Free antibody at 1 µg/mL.