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ELOVL6 Antibody

Catalog # ASC10681

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9H5J4
Other Accession	NP_076995, 13129088
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	31376
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	ELOVL6 antibody can be used for detection of ELOVL6 by Western blot at 1 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	79071
Other Names	Elongation of very long chain fatty acids protein 6, 2.3.1.199, 3-keto acyl-CoA synthase ELOVL6, ELOVL fatty acid elongase 6, ELOVL FA elongase 6, Fatty acid elongase 2, hELO2, Fatty acyl-CoA elongase, Long-chain fatty-acyl elongase, Very-long-chain 3-oxoacyl-CoA synthase 6, ELOVL6, FACE, LCE
Target/Specificity	ELOVL6;
Reconstitution & Storage	ELOVL6 antibody can be stored at 4℃ for three months and -20℃, 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	ELOVL6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ELOVL6 {ECO:0000255|HAMAP-Rule:MF_03206}
Synonyms	FACE, LCE
Function	Catalyzes the first and rate-limiting reaction of the four reactions that constitute the long-chain fatty acids elongation cycle. This endoplasmic reticulum-bound enzymatic process allows the addition of 2 carbons to the chain of long- and very long-chain fatty acids (VLCFAs) per cycle. Condensing enzyme that elongates fatty acids with 12, 14 and 16 carbons with higher

	activity toward C16:0 acyl-CoAs. Catalyzes the synthesis of unsaturated C16 long chain fatty acids and, to a lesser extent, C18:0 and those with low desaturation degree. May participate in the production of saturated and monounsaturated VLCFAs of different chain lengths that are involved in multiple biological processes as precursors of membrane lipids and lipid mediators.
Cellular Location	Endoplasmic reticulum membrane {ECO:0000255|HAMAP-Rule:MF_03206, ECO:0000269|PubMed:20937905}; Multi- pass membrane protein {ECO:0000255|HAMAP-Rule:MF_03206}
Tissue Location	Ubiquitous..

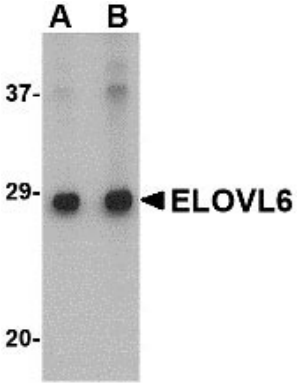
Background

ELOVL6 Antibody: Lipogenesis is a key event in the energy storage system and is controlled by the transcription factor sterol regulatory element-binding protein (SREBP)-1. Elongation of very long chain fatty acids protein 6 (ELOVL6) is a member of fatty acyl-CoA elongase gene family that converts palmitic to stearic acid and it has been shown to be a target of SREBP-1, playing an important role in de novo synthesis of long-chain saturated and monosaturated fatty acids in conjunction with fatty acid synthase and stearoyl-CoA desaturase ELOVL6 was predicted to be important for tissue fatty acid composition. Recent studies suggest that inhibition of this elongase could be a new therapeutic approach for ameliorating insulin resistance, diabetes and cardiovascular risks, even in the presence of a continuing state of obesity.

References

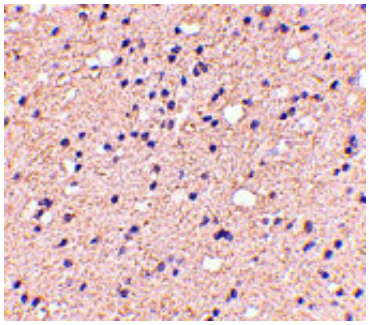
Moon YA, Shah NA, Mohapatra S, et al. Identification of a mammalian long chain fatty acyl elongase regulated by sterol regulatory element-binding proteins. J. Biol. Chem. 2001; 276:45358-66.
Matsuzaka T, Shimano H, Yahaqi N, et al. Cloning and characterization of a mammalian fatty acyl-CoA elongase as a lipogenic enzyme regulated by SREBPs. J. Lipid Res. 2002; 43:911-20.
Matsuzaka T, Shimano H, Yahaqi N, et al. Crucial role of a long-chain fatty acid elongase, Elovl6, in obesity-induced insulin resistance. Nat. Med. 2007; 13:1193 -202.

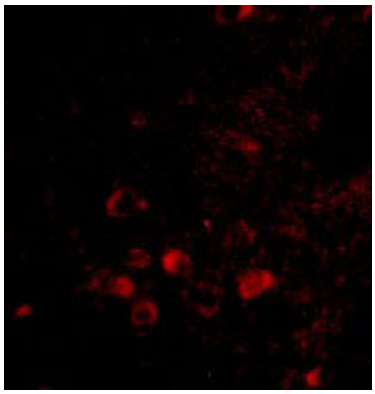
Images



Western blot analysis of ELOVL6 in Human brain tissue lysate with ELOVL6 antibody at (A) 1 and (B) 2 µg/mL.

Immunohistochemistry of ELOVL6 in human brain tissue with ELOVL6 antibody at 5 µg/mL.





Immunofluorescence of ELOVL6 in Human Brain tissue with ELOVL6 antibody at 20 µg/mL.