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CIDEC Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO2076a

Product Information

Application	WB, E
Primary Accession	Q96AQ7
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2A11D11
Isotype	IgG1
Calculated MW	26754
Description	This gene encodes a member of the cell death-inducing DNA fragmentation factor-like effector family. Members of this family play important roles in apoptosis. The encoded protein promotes lipid droplet formation in adipocytes and may mediate adipocyte apoptosis. This gene is regulated by insulin and its expression is positively correlated with insulin sensitivity. Mutations in this gene may contribute to insulin resistant diabetes. A pseudogene of this gene is located on the short arm of chromosome 3. Alternatively spliced transcript variants that encode different isoforms have been observed for this gene.
Immunogen	Purified recombinant fragment of human CIDEC (AA: 53-141) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	63924
Other Names	Cell death activator CIDE-3, Cell death-inducing DFFA-like effector protein C, Fat-specific protein FSP27 homolog, CIDEC, FSP27
Dilution	WB~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CIDEC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CIDEC {ECO:0000303|PubMed:20049731, ECO:0000312|HGNC:HGNC:24229}
Function	Lipid transferase specifically expressed in white adipose tissue, which promotes unilocular lipid droplet formation by mediating lipid droplet fusion (PubMed:18334488, PubMed:19843876, PubMed:20049731, PubMed:23399566, PubMed:30361435). Lipid droplet fusion promotes their enlargement, restricting lipolysis and favoring lipid storage (PubMed:18334488, PubMed:19843876, PubMed:20049731, PubMed:23399566). Localizes on the lipid droplet surface, at focal contact sites between lipid droplets, and mediates atypical lipid droplet fusion by undergoing liquid-liquid phase separation (LLPS) and promoting directional net neutral lipid transfer from the smaller to larger lipid droplets (PubMed:18334488, PubMed:19843876, PubMed:20049731, PubMed:23399566). The transfer direction may be driven by the internal pressure difference between the contacting lipid droplet pair (PubMed:18334488, PubMed:19843876, PubMed:20049731, PubMed:23399566). Its role in neutral lipid transfer and lipid droplet enlargement is activated by the interaction with PLIN1 (PubMed:23399566). May also act as a CEBPB coactivator in the white adipose tissue to control the expression of a subset of CEBPB downstream target genes, including SOCS1, SOCS3, TGFB1, TGFBR1, ID2 and XDH (By similarity). When overexpressed in preadipocytes, induces apoptosis or increases cell susceptibility to apoptosis induced by serum deprivation or TGFB treatment (PubMed:12429024).
Cellular Location	Lipid droplet. Endoplasmic reticulum {ECO:0000250|UniProtKB:P56198}. Nucleus {ECO:0000250|UniProtKB:P56198} Note=Diffuses quickly on lipid droplet surface, but becomes trapped and clustered at lipid droplet contact sites, thereby enabling its rapid enrichment at lipid droplet contact sites {ECO:0000250|UniProtKB:P56198}
Tissue Location	Expressed mainly in adipose tissue, small intestine, heart, colon and stomach and, at lower levels, in brain, kidney and liver.

References

1.Obesity (Silver Spring). 2010 Feb;18(2):417-9.2.EMBO Mol Med. 2009 Aug;1(5):280-7.

Images

