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Anti-ACER3 Antibody

Catalog # AP53329

Product Information

Application	WB, IHC, IF/IC
Primary Accession	Q9NUN7
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	31552

Additional Information

Gene ID	55331
Other Names	APHC; PHCA; Alkaline ceramidase 3; AlkCDase 3; Alkaline CDase 3; Alkaline dIHCydroceramidase SB89; Alkaline phytoceramidase; aPHC
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human ACER3. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

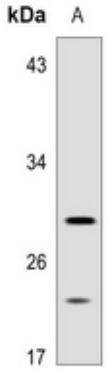
Name	ACER3
Synonyms	APHC, PHCA
Function	Endoplasmic reticulum and Golgi ceramidase that catalyzes the hydrolysis of unsaturated long-chain C18:1-, C20:1- and C20:4- ceramides, dihydroceramides and phytoceramides into sphingoid bases like sphingosine and free fatty acids at alkaline pH (PubMed:11356846, PubMed:20068046, PubMed:20207939, PubMed:26792856, PubMed:30575723). Ceramides, sphingosine, and its phosphorylated form sphingosine-1- phosphate are bioactive lipids that mediate cellular signaling pathways regulating several biological processes including cell proliferation, apoptosis and differentiation (PubMed:20068046). Controls the generation of sphingosine in erythrocytes, and thereby sphingosine-1- phosphate in plasma (PubMed:20207939). Through the regulation of ceramides and sphingosine-1-phosphate homeostasis in the brain may play a role in neurons survival and function (By similarity). By regulating the levels of pro-inflammatory ceramides in immune

	cells and tissues, may modulate the inflammatory response (By similarity).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus membrane; Multi-pass membrane protein
Tissue Location	Ubiquitously expressed. Highly expressed in placenta (PubMed:11356846). Expressed in erythrocytes (PubMed:20207939).

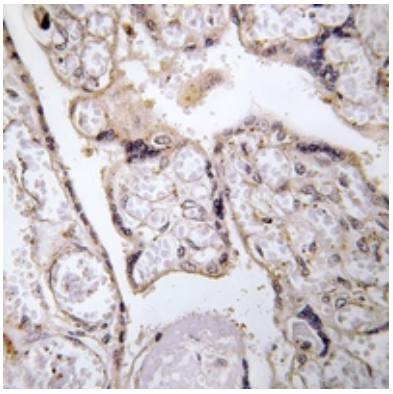
References

Mao C.,et al.J. Biol. Chem. 276:26577-26588(2001).
Li N.,et al.Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Taylor T.D.,et al.Nature 440:497-500(2006).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.

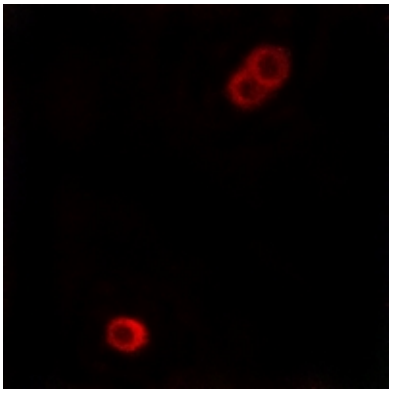
Images



Western blot analysis of ACER3 expression in human placenta (A) whole cell lysates. (Predicted band size: 31 kD; Observed band size: 32 kD)



Immunohistochemical analysis of ACER3 staining in human placenta formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of ACER3 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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