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ACER1 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP18654b

Specification

ACER1 Antibody (C-term) - Product Information

Application	**WB,E**
Primary Accession	Q8TDN7
Other Accession	NP_597999.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**31095**
Antigen Region	**236-263**

ACER1 Antibody (C-term) - Additional Information

Gene ID 125981

Other Names
Alkaline ceramidase 1, AlkCDase 1, Alkaline CDase 1, Acylsphingosine deacylase 3, N-acylsphingosine amidohydrolase 3, ACER1, ASAH3

Target/Specificity
This ACER1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 236-263 amino acids from the C-terminal region of human ACER1.

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
ACER1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

ACER1 Antibody (C-term) - Protein Information

Name ACER1 (HGNC:18356)

Synonyms ASAH3

Function Endoplasmic reticulum ceramidase that catalyzes the hydrolysis of ceramides into sphingosine and free fatty acids at alkaline pH (PubMed:17713573, PubMed:20207939, PubMed:20628055). 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:12783875). Exhibits a strong substrate specificity towards the natural stereoisomer of ceramides with D-erythro-sphingosine as a backbone and has a higher activity towards very long-chain unsaturated fatty acids like the C24:1-ceramide (PubMed:17713573, PubMed:20207939). May also hydrolyze dihydroceramides to produce dihydrosphingosine (PubMed:20207939, PubMed:20628055). ACER1 is a skin-specific ceramidase that regulates the levels of ceramides, sphingosine and sphingosine-1-phosphate in the epidermis, mediates the calcium-induced differentiation of epidermal keratinocytes and more generally plays an important role in skin homeostasis (PubMed:17713573).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

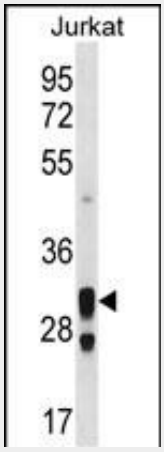
Tissue Location
Mainly expressed in epidermis.

ACER1 Antibody (C-term) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

ACER1 Antibody (C-term) - Images



ACER1 Antibody (C-term) (Cat. #AP18654b) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the ACER1 antibody detected the ACER1 protein (arrow).

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ACER1 Antibody (C-term) - Background

Ceramides are synthesized during epidermal differentiation and accumulate within the interstices of the stratum corneum, where they represent critical components of the epidermal permeability barrier. Excess cellular ceramide can trigger antimitogenic signals and induce apoptosis, and the ceramide metabolites sphingosine and sphingosine-1-phosphate (S1P) are important bioregulatory molecules. Ceramide hydrolysis in the nucleated cell layers regulates keratinocyte proliferation and apoptosis in response to external stress. Ceramide hydrolysis also occurs at the stratum corneum, releasing free sphingoid base that functions as an endogenous antimicrobial agent. ACER1 is highly expressed in epidermis and catalyzes the hydrolysis of very long chain ceramides to generate sphingosine (Houben et al., 2006 [PubMed 16477081]; Sun et al., 2008 [PubMed 17713573]).

ACER1 Antibody (C-term) - References

Sun, W., et al. J. Invest. Dermatol. 128(2):389-397(2008)
Toulza, E., et al. Genome Biol. 8 (6), R107 (2007) :
Houben, E., et al. J. Lipid Res. 47(5):1063-1070(2006)
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