

**ACER1 Antibody (C-term)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP18654b**

**Specification**

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**ACER1 Antibody (C-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q8TDN7</a>
Other Accession	<a href="#">NP_597999.1</a>
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

**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

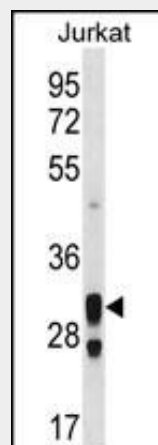
Mainly expressed in epidermis.

### 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 Cytometry](#)
- [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).

### 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 antimetogenic 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)
- Mao, C., et al. J. Biol. Chem. 278(33):31184-31191(2003)
- Ito, M., et al. Tanpakushitsu Kakusan Koso 47 (4 SUPPL), 455-462 (2002) :