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ACER1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP18654b

Specification

ACER1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q8TDN7

ACER1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 125981

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

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

ACER1 Antibody (C-term) Blocking Peptide - 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:<a

href="http://www.uniprot.org/citations/20628055" target="_blank">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) Blocking Peptide - Protocols

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

- Blocking Peptides

ACER1 Antibody (C-term) Blocking Peptide - Images

ACER1 Antibody (C-term) Blocking Peptide - Background

Ceramides are synthesized during epidermal differentiationand accumulate within the interstices of the stratum corneum, wherethey represent critical components of the epidermal permeabilitybarrier. Excess cellular ceramide can trigger antimitogenic signalsand induce apoptosis, and the ceramide metabolites sphingosine andsphingosine-1-phosphate (S1P) are important bioregulatorymolecules. Ceramide hydrolysis in the nucleated cell layersregulates keratinocyte proliferation and apoptosis in response toexternal stress. Ceramide hydrolysis also occurs at the stratumcorneum, releasing free sphingoid base that functions as anendogenous antimicrobial agent. ACER1 is highly expressed inepidermis and catalyzes the hydrolysis of very long chain ceramidesto generate sphingosine (Houben et al., 2006 [PubMed 16477081]; Sunet al., 2008 [PubMed 17713573]).

ACER1 Antibody (C-term) Blocking Peptide - 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) :