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ASAH3L Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP50775

Product Information

Application	WB
Primary Accession	Q5QJU3
Reactivity	Human, Mouse
Host	Rabbit
Clonality	polyclonal
Calculated MW	31309

Additional Information

Gene ID	340485
Other Names	Alkaline ceramidase 2, AlkCDase 2, Alkaline CDase 2, haCER2, Acylsphingosine deacylase 3-like, N-acylsphingosine amidohydrolase 3-like, ACER2, ASAH3L
Dilution	WB~~ 1:1000
Format	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.09% (W/V) sodium azide and 50% glycerol.
Storage Conditions	-20℃

Protein Information

Name	ACER2 (HGNC:23675)
Synonyms	ASAH3L
Function	Golgi ceramidase that catalyzes the hydrolysis of ceramides into sphingoid bases like sphingosine and free fatty acids at alkaline pH (PubMed:16940153, PubMed:18945876, PubMed:20089856, PubMed:20207939). 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:20207939). Has a better catalytic efficiency towards unsaturated long-chain ceramides, including C18:1-, C20:1- and C24:1-ceramides (PubMed:16940153, PubMed:18945876, PubMed:20089856, PubMed:20207939). Saturated long-chain ceramides and unsaturated very long-chain ceramides are also good substrates, whereas saturated very long-chain ceramides and short-chain ceramides are poor substrates (PubMed:20089856). Also hydrolyzes dihydroceramides to produce dihydrosphingosine (PubMed:20207939, PubMed:20628055). It is the ceramidase that controls the levels of circulating sphingosine-1- phosphate

	and dihydrosphingosine-1-phosphate in plasma through their production by hematopoietic cells (By similarity). Regulates cell proliferation, autophagy and apoptosis by the production of sphingosine and sphingosine-1-phosphate (PubMed:16940153, PubMed:26943039, PubMed:28294157, PubMed:29229990). As part of a p53/TP53-dependent pathway, promotes for instance autophagy and apoptosis in response to DNA damage (PubMed:26943039, PubMed:28294157, PubMed:29229990). Through the production of sphingosine, may also regulate the function of the Golgi complex and regulate the glycosylation of proteins (PubMed:18945876).
Cellular Location	Golgi apparatus membrane; Multi-pass membrane protein
Tissue Location	Highly expressed in placenta.

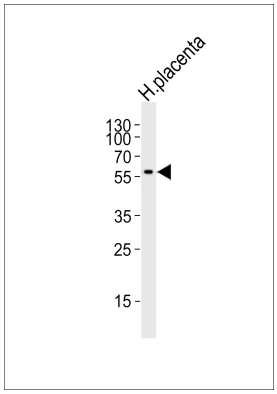
Background

Hydrolyzes the sphingolipid ceramide into sphingosine and free fatty acid. Unsaturated long-chain ceramides are the best substrates, saturated long-chain ceramides and unsaturated very long-chain ceramides are good substrates, whereas saturated very long-chain ceramides and short-chain ceramides were poor substrates. The substrate preference is D-erythro-C(18:1)-, C(20:1)-, C(20:4)-ceramide > D-erythro-C(16:0)-, C(18:0), C(20:0)- ceramide > D-erythro-C(24:1)-ceramide > D-erythro-C(12:0)- ceramide, D-erythro-C(14:0)-ceramides > D-erythro-C(24:0)-ceramide > D-erythro-C(6:0)-ceramide. Inhibits the maturation of protein glycosylation in the Golgi complex, including that of integrin beta-1 (ITGB1) and of LAMP1, by increasing the levels of sphingosine. Inhibits cell adhesion by reducing the level of ITGB1 in the cell surface. May have a role in cell proliferation and apoptosis that seems to depend on the balance between sphingosine and sphingosine-1-phosphate.

References

Xu R.,et al.FASEB J. 20:1813-1825(2006).
Wan D.,et al.Proc. Natl. Acad. Sci. U.S.A. 101:15724-15729(2004).
Humphray S.J.,et al.Nature 429:369-374(2004).
Sun W.,et al.FASEB J. 23:656-666(2009).
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Images



Western blot analysis of lysate from human placenta tissue lysate,using ASAH3L Antibody(AP50775). AP50775 was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody.Lysate at 35ug.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.