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APH1 Antibody

Catalog # ASC10486

Product Information

Application	WB, E, IHC-P
Primary Accession	Q96BI3
Other Accession	AAH08732, 14250557
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	28996
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	APH1 antibody can be used for detection of APH1 by Western blot at 0.5 - 1 g/mL. Despite its predicted molecular weight, APH1 protein often migrates at aberrant locations in SDS-PAGE. Antibody can also be used for immunohistochemistry starting at 5 g/mL.

Additional Information

Gene ID	51107
Other Names	APH1 Antibody: APH-1, APH-1A, CGI-78, 6530402N02Rik, PSF, UNQ579/PRO1141, Gamma-secretase subunit APH-1A, Aph-1alpha, APH-1a, anterior pharynx defective 1 homolog A (C. elegans)
Target/Specificity	APH1A;
Reconstitution & Storage	APH1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	APH1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	APH1A
Synonyms	PSF
Function	Non-catalytic subunit of the gamma-secretase complex, an endoprotease complex that catalyzes the intramembrane cleavage of integral membrane proteins such as Notch receptors and APP (amyloid- beta precursor protein) (PubMed:12297508, PubMed:12522139, PubMed:12679784, PubMed:12763021, PubMed:25043039, PubMed:26280335,

	PubMed:30598546, PubMed:30630874). Required for normal gamma-secretase assembly (PubMed:12471034, PubMed:12522139, PubMed:12763021, PubMed:19369254). The gamma-secretase complex plays a role in Notch and Wnt signaling cascades and regulation of downstream processes via its role in processing key regulatory proteins, and by regulating cytosolic CTNNB1 levels (Probable).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Golgi apparatus, Golgi stack membrane; Multi-pass membrane protein. Note=Predominantly located in the endoplasmic reticulum and in the cis-Golgi
Tissue Location	Widely expressed. Expressed in leukocytes, lung, placenta, small intestine, liver, kidney, spleen thymus, skeletal muscle, heart and brain. Isoform 1 and isoform 2 are nearly expressed at the same level.

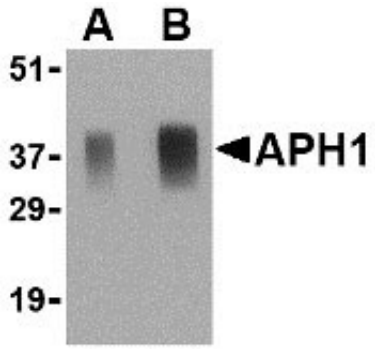
Background

APH1 Antibody: APH1 was initially identified as a component of the Notch pathway in C. elegans. Along with nicastrin, PEN2, and presenilin-1 APH1 is an essential component of the gamma-secretase complex which cleave the amyloid precursor protein (APP) at what are known as the gamma- and epsilon-sites and can lead to the accumulation of the Amyloid beta peptide (Abeta) cleavage product that is associated with Alzheimer's disease. APH1 exists in at least three distinct isoforms with APH1a as the principal isoform present in the gamma-secretase complex. Mice deficient in this isoform, but not the other two, were lethal at E10.5, with impaired vascular and neural development observed.

References

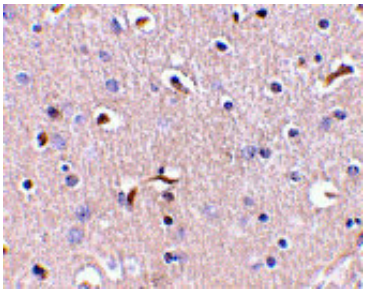
Goutte C, Tsunozaki M, Hale VA, et al. APH-1 is a multipass membrane protein essential for the Notch signaling pathway in Caenorhabditis elegans embryos. Proc. Natl. Acad. Sci. USA2002; 99:775-9.
Periz G and Fortini ME. Functional reconstitution of γsecretase through coordinated expression of presenilin, nicastrin, aph-1, and pen-2. J. Neurosci. Res. 2004; 77:309-22.
Selkoe DJ. The cell biology of βamyloid precursor protein and presenilin in Alzheimer's disease. Trends Cell Biol. 1998; 8:447-53.
Ma G, Li T, Price DL, et al. APH-1a is the principal mammalian aph-1 isoform present in g-secretase complexes during embryonic development. Neuro. Dis. 2005; 25:192-8.

Images



Western blot analysis of APH1 in human brain tissue lysate with APH1 antibody at (A) 0.5 and (B) 1 µg/mL.

Immunohistochemistry of APH1 in human brain tissue with APH1 antibody at 5 µg/mL.



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