

**APH1 Antibody**  
**Catalog # ASC10486****Specification**

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**APH1 Antibody - Product Information**

Application	WB, IHC-P, E
Primary Accession	<a href="#">Q96BI3</a>
Other Accession	<a href="#">AAH08732</a> , <a href="#">14250557</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Application Notes	APH1 antibody can be used for detection of APH1 by Western blot at 0.5 - 1 µg/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 µg/mL.

**APH1 Antibody - 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°C for three months and -20°C, 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.

**APH1 Antibody - 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:<a href="http://www.uniprot.org/citations/12297508" target="\_blank">12297508</a>, PubMed:<a href="http://www.uniprot.org/citations/12522139" target="\_blank">12522139</a>, PubMed:<a href="http://www.uniprot.org/citations/12679784" target="\_blank">12679784</a>, PubMed:<a href="http://www.uniprot.org/citations/12763021" target="\_blank">12763021</a>, PubMed:<a href="http://www.uniprot.org/citations/25043039" target="\_blank">25043039</a>, PubMed:<a href="http://www.uniprot.org/citations/26280335" target="\_blank">26280335</a>, PubMed:<a href="http://www.uniprot.org/citations/30598546" target="\_blank">30598546</a>, PubMed:<a href="http://www.uniprot.org/citations/30630874" target="\_blank">30630874</a>). Required for normal gamma-secretase assembly (PubMed:<a href="http://www.uniprot.org/citations/12471034" target="\_blank">12471034</a>, PubMed:<a href="http://www.uniprot.org/citations/12522139" target="\_blank">12522139</a>, PubMed:<a href="http://www.uniprot.org/citations/12763021" target="\_blank">12763021</a>, PubMed:<a href="http://www.uniprot.org/citations/19369254" target="\_blank">19369254</a>). 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 CTNBN1 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

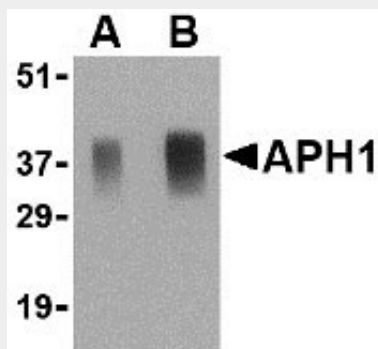
Widely expressed. Expressed in leukocytes, lung, placenta, small intestine, liver, kidney, spleen thymus, skeletal muscle, heart and brain. Isoform 1 and isoform 2 are nearly expressed at the same level.

### APH1 Antibody - Protocols

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

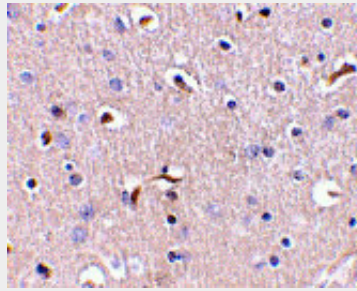
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### APH1 Antibody - 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.

#### **APH1 Antibody - 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 (Aβ) 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.

#### **APH1 Antibody - 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. USA* 2002; 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 γ-secretase complexes during embryonic development. *Neuro. Dis.* 2005; 25:192-8.