ZYMED® Laboratories

invitrogen immunodetection

Qty: 100μg/400 μL

Rabbit anti-Aph-1a

Catalog No. 38-3600

Lot No.

Rabbit anti-Aph-1a

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.369

IMMUNOGEN
Synthetic peptide derived from the C-terminal region of human Aph-1a

SPECIFICITY
This antibody reacts with the ~29 kDa human Aph-1a protein. A fragment of Aph-1a may also be observed at ~23 kDa. According to amino acid sequence homology, this antibody will only recognize the long isoform of Aph-1a.

REACTIVITY
Reactivity has been confirmed in Western blotting and immunoprecipitation applications with human Aph-1a-transfected N2a mouse neuroblastoma lysates. Bands representing both endogenous and exogenous Aph-1a were observed. The non-transfected N2a cell lysates only showed endogenous Aph-1a expression.

Sample	Western Blotting	Immunoprecipitation (native)
Human	+++	++
Mouse	++	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 μg/mL
Immunoprecipitation: 7-10 μg/ IP reaction

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Aph-1 is a component of the gamma-secretase multiprotein complex, which consists of presenilin (PS), nicastrin, Aph-1 and Pen-2, which are all necessary for full proteolytic activity. γ-Secretase is the proteolytic activity responsible for the cleavage of a series of integral membrane proteins, most notably the Amyloid Precursor Protein (APP) and Notch, but also including ErbB-4, E-Cadherin, LRP, and CD44.[1] Aph-1 and Pen-2 are the limiting cellular factors that control presenilin expression, and thus, γ-Secretase's catalytic activity.[2] Because γ-Secretase is responsible for the release of amyloid peptide from APP, current research has centered around using γ-Secretase as a potential Alzheimer's disease drug target.[1]

Two mammalian homologues of Aph-1 have been identified: Aph-1a and Aph-1b, of which Aph-1a is more abundantly expressed than Aph-1b in human tissue samples. In addition, Aph-1a also occurs as two splice isoforms, long and short, that diverge at the C-terminus.[3]

REFERENCES

1. De Strooper BD. *Neuron* 38(1): 9-12, 2003.
2. Thinakaran G, et al. *Neuron* 17(1): 181-190, 1996.
3. Kimberly W, et al. *PNAS* 100(11): 6382-6387, 2003.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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