

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human APP695 <sup>+</sup> and human APP770 in direct ELISAs and Western blots. This antibody recognizes a common epitope present on APP695 <sup>+</sup> and APP770 found within the segments Leu18 - Arg288 or Pro365 - Arg411 of APP770 (Accession P05067).
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human APP 695 <sup>+</sup> frameshift mutant Leu18-Arg336 Accession # NP_958817
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Human APP <sup>+</sup> Western Blot Standard (Catalog # <a href="#">WBC012</a> )
<b>Immunohistochemistry</b>	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human Alzheimer's disease brain

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Amyloid precursor protein (APP) is a type I membrane protein with several human isoforms due to alternative splicing. APP-770, -751, and -733 contain a Kunitz protease inhibitor (KPI) domain (residue 291 - 342) and APP-695 does not. APP is a cell surface molecule with many functions. It can be processed proteolytically in two different pathways. In one pathway, β- and γ-secretase cleave at the β site between residue 670 and 671 and the γ site between residue 711 and 714 to produce β-amyloid peptide (Aβ40 and Aβ42), a major component in plaques found in brains of patients with Alzheimer's disease (1). The other pathway involves α-secretase that cleaves residues between 687 and 688. It is anti-amyloidogenic due to its benign character and the prevention of the Aβ peptide formation (2). Soluble APP containing the KPI domain, also referred to as protease nexin II, is a potent inhibitor of serine proteases and may have additional functions. For example, it may regulate the contact face of blood coagulation and limit thrombosis specially in brain due to its localization and coagulation factor XI inhibiting activity (3, 4).

## References:

1. Haass, C. (2004) EMBO J. **23**:483.
2. Lichtenthaler, S. F. and C. Haass (2004) J. Clin. Invest. **113**:1384.
3. Badellino, K.O. and P.N. Walsh (2000) Biochemistry **39**:4769.
4. Xu, F. *et al.* (2005) Proc. Natl. Acad. Sci USA. **102**:18135.