# Human APP$^{+1}$ Antibody

Antigen Affinity-purified Polyclonal Rabbit IgG
Catalog Number: AF850

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Human |
| **Specificity** | Detects human APP$^{+1}$ in Western blots. |
| **Source** | Polyclonal Rabbit IgG |
| **Purification** | Antigen Affinity-purified |
| **Immunogen** | KLH-coupled human APP$^{+1}$ synthetic peptide<br>CMRMGRGRTSSKELA |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

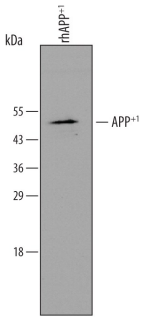
## APPLICATIONS

**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.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 0.5 µg/mL | See Below |

## DATA

### Western Blot




**Detection of Human APP$^{+1}$ by Western Blot.** Western blot shows samples of Recombinant Human APP$^{+1}$ Western Blot Standard (Catalog # WBC012) (10 ng). PVDF membrane was probed with 0.5 µg/mL Rabbit Anti-Human APP$^{+1}$ Antigen Affinity-purified Polyclonal Antibody (Catalog # AF850) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # HAF008). A specific band for APP was detected at approximately 46 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 4.

## PREPARATION AND STORAGE

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|---|---|
| **Reconstitution** | Reconstitute at 0.2 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

## 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 antiamyloidogenic 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.




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