

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human APP695 <sup>+1</sup> in direct ELISAs and Western blots.                                                                                                                                                                                                      |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human APP695 <sup>+1</sup> frameshift mutant<br>Met1-Arg336<br>Accession # NP_958817                                                                                                                |
| <b>Conjugate</b>          | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

Amyloid precursor protein (APP) is a type I membrane protein with several human isoforms due to alternative splicing. APP770, 751, and 733 contain a Kunitz protease inhibitor (KPI) domain (residue 291-342) and APP695 does not. APP is a cell surface molecule with many functions. It can be processed proteolytically in two different pathways. In one pathway,  $\beta$ - and  $\gamma$ -secretase cleave at the  $\beta$  site between residue 670 and 671 and the  $\gamma$  site between residue 711 and 714 to produce  $\beta$ -amyloid peptide (A $\beta$ 40 and A $\beta$ 42), a major component in plaques found in brains of patients with Alzheimer's disease (1). The other pathway involves  $\alpha$ -secretase that cleaves residues between 687 and 688. It is anti-amyloidogenic due to its benign character and the prevention of the A $\beta$  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).

#### PRODUCT SPECIFIC NOTICES

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