



## *Monoclonal Anti-human APLP-2 Antibody*

### ORDERING INFORMATION

**Catalog Number:** MAB4945

**Clone:** 397718

**Lot Number:** CAFH01

**Size:** 100 µg

**Formulation:** 0.2 µm filtered solution in PBS  
with 5% trehalose

**Storage:** -20° C

**Reconstitution:** sterile PBS

**Specificity:** human APLP-2

**Immunogen:** NS0-derived rhAPLP-2

**Ig class:** mouse IgG<sub>1</sub>

**Recommended Application:**  
Western blot

**Other Application:**  
Direct ELISA

### ***Background***

Amyloid beta precursor-like protein 2 (APLP-2) is a 120 - 170 kDa member of the APP family of neuronal type I transmembrane proteins. Its extracellular domain consists of an N-terminal Cys-rich domain, an Asp/Glu-rich acidic region, a Kunitz protease inhibitor (KPI) domain, and a GAG attachment site in the membrane proximal domain. APLP-2 forms both homodimers and heterodimers with APP and APLP-1. Proteolytic cleavage of APLP-2 generates peptides similar to the amyloidogenic Aβ peptides and a cytoplasmic fragment that functions as a transcriptional coactivator. Alternate splicing of APLP-2 generates isoforms that lack the KPI domain or contain an insertion that prevents GAG attachment. The extracellular domain of human APLP-2 shares 81% and 93% aa sequence identity with mouse and rat APLP-2, respectively.

### ***Preparation***

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, NS0-derived, recombinant human APLP-2 (rhAPLP-2; aa 30 - 680; Accession # Q06481). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography.

### ***Formulation***

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) with 5% trehalose.

### ***Reconstitution***

Reconstitute with sterile PBS. If 0.2 mL of PBS is used, the antibody concentration will be 500 µg/mL.

### ***Storage***

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C in a **manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

### ***Specificity***

This antibody detects rhAPLP-2 in direct ELISAs and Western blots. In these formats, this antibody shows slight cross-reactivity with rmAPLP-2 and no cross-reactivity with rhAPLP-1 or rmAPLP-1.

### ***Applications***

**Western blot** - This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human APLP-2. Using a colorimetric detection system, the detection limit for rhAPLP-2 is approximately 25 ng/lane under non-reducing and reducing conditions. Chemiluminescent detection will increase sensitivity by 5 to 50 fold.

**Direct ELISA** - This antibody can be used at 0.5 - 1.0 µg/mL with the appropriate secondary reagents to detect human APLP-2. The detection limit for rhAPLP-2 is approximately 2.5 ng/well.

**Optimal dilutions should be determined by each laboratory for each application.**

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