SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

APLP1

Cat.No. 489 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. For **reconstitution** add 100 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**WB**: 1 : 1000 (AP staining) **IP**: not tested yet **ICC**: 1 : 500 **IHC**: not tested yet **IHC-P (FFPE)**: 1 : 1000
Clone	SY-344A12
Subtype	IgG2c (κ light chain)
Immunogen	Synthetic peptide corresponding to residues near the carboxy terminus of mouse APLP1 (UniProt Id: Q03157)
Reactivity	Reacts with: mouse (Q03157), rat (B1WBV6). Other species not tested yet.
Specificity	K.O. validated PubMed: 42982811

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

Amyloid beta **p**recursor **l**ike **p**rotein **1** and 2 (APLP1 and 2) and amyloid precursor protein (APP) belong to one protein family that all share considerable sequence homolgy in the amino- and carboxyl termini (1, 2). In contrast to APP, APLP1 and 2 do not contain the Abeta motif. Like APP, APLP1 and 2 are processed by alpha-, beta-, and gamma-secretase leading to a secreted ecto-domain and a membrane-anchored C-terminal fragment (3). APLPs function as synaptic adhesion molecules (SAMs) and are involved in synaptogenesis (4).
In contrast to the ubiquitously expressed APLP2, APLP1 selectively occurs in neuronal cells and has been shown to accumulate in neuritic plaques during Alzheimer's disease(4, 5).

Selected References for 489 011

Physiological APP processing is required for synaptic plasticity and cognition.
Kilian L, Bengelsdorff V, Just J, Stork S, Galanis C, Banicevic M, Amrein I, Back M, Jungenitz T, Fellenz M, von Engelhardt J, et al.
Cell death & disease (2026) 171: . . **WB; KO verified; tested species: mouse**

Selected General References

Molecular cloning of the cDNA for a human amyloid precursor protein homolog: evidence for a multigene family.
Sprecher CA et al. Biochemistry (1993) PubMed:8485127

APLP1 Is a Synaptic Cell Adhesion Molecule, Supporting Maintenance of Dendritic Spines and Basal Synaptic Transmission.
Schilling S et al. J. Neurosci. (2017) PubMed:28450540

Cleavage of amyloid-beta precursor protein and amyloid-beta precursor-like protein by BACE 1.
Li Q et al. J Biol Chem (2004) PubMed:14699153

Amyloid precursor-like protein 1 accumulates in neuritic plaques in Alzheimer's disease.
Bayer TA et al. Acta Neuropathol (1997) PubMed:9444352

Expression of a ubiquitous, cross-reactive homologue of the mouse beta-amyloid precursor protein (APP).
Slunt HH et al. J Biol Chem (1994) PubMed:8300594

Access the online factsheet including applicable protocols at https://sysy.com/product/489011 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.