SYSY Antibodies

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Pax6

Cat.No. 153 011; 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**: yes **IHC**: not tested yet **IHC-P**: 1 : 200 up to 1 : 500 (see remarks)
Clone	AD2.38
Subtype	IgG1 (λ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 422 from mouse Pax6 (UniProt Id: P63015)
Epitop	Epitop: AA 4 to 130 from mouse Pax6 (UniProt Id: P63015)
Reactivity	Reacts with: human (P26367), rat (P63016), mouse (P63015), chicken. Other species not tested yet.
Specificity	K.O. validated PubMed: 10409504
Remarks	Nuclear extracts from tissues should be used for Western blot experiments to increase the concentration of Pax 6. **IHC-P**: Antigen retrieval at pH 9.0 (Tris-EDTA) for 30min at 97°C

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

Background

Pax 6 (**Sey**) proteins regulate transcription and are composed of two DNA binding motives, an N-terminal paired domain (PD) and a C-terminal homeodomain (HD).
Mutations or deletions in the Pax 6 gene cause severe defects in the development of the eye and the central nervous system (CNS). The Pax 6 mRNA is alternatively spliced at position 47 and is translated into two proteins of 46 and 48 kDa. The amino acid sequence and basic regulatory mechanisms of Pax 6 are conserved from invertebrates to mammals.

Selected References for 153 011

Role of Pax6 in development of the cerebellar system.
Engelkamp D, Rashbass P, Seawright A, van Heyningen V
Development (Cambridge, England) (1999) 12616: 3585-96. . **WB, IHC; KO verified; tested species: mouse**

Lymphoblast-derived integration-free iPSC lines from a female and male Alzheimer's disease patient expressing different copy numbers of a coding CNV in the Alzheimer risk gene CR1.
Schröter F, Sleegers K, Van Cauwenberghe C, Bohndorf M, Wruck W, Van Broeckhoven C, Adjaye J
Stem cell research (2016) 173: 560-563. . **ICC**

Induction of granule and Purkinje cells from primary cultured mouse cerebellar progenitors.
Zhang T, Liu T, Hassan BA
STAR protocols (2021) 23: 100760. . **ICC; tested species: mouse**

Generation of excitatory and inhibitory neurons from common progenitors via Notch signaling in the cerebellum.
Zhang T, Liu T, Mora N, Guegan J, Bertrand M, Contreras X, Hansen AH, Streicher C, Anderle M, Danda N, Tiberi L, et al.
Cell reports (2021) 3510: 109208. . **IHC; tested species: mouse**

IPSC-Derived Neuronal Cultures Carrying the Alzheimer's Disease Associated TREM2 R47H Variant Enables the Construction of an Aβ-Induced Gene Regulatory Network.
Martins S, Müller-Schiffmann A, Erichsen L, Bohndorf M, Wruck W, Sleegers K, Van Broeckhoven C, Korth C, Adjaye J
International journal of molecular sciences (2020) 2112: . . **ICC; tested species: human**

Mutations in the Heterotopia Gene Eml1/EML1 Severely Disrupt the Formation of Primary Cilia.
Uzquiano A, Cifuentes-Diaz C, Jabali A, Romero DM, Houllier A, Dingli F, Maillard C, Boland A, Deleuze JF, Loew D, Mancini GMS, et al.
Cell reports (2019) 286: 1596-1611.e10. . **ICC; tested species: mouse**

Lymphoblast-derived integration-free ISRM-CON9 iPS cell line from a 75year old female.
Martins S, Bohndorf M, Schröter F, Assar F, Wruck W, Sleegers K, Van Broeckhoven C, Adjaye J
Stem cell research (2018) 26: 76-79. . **IHC; tested species: human**

Lymphoblast-derived integration-free iPS cell line from a female 67-year-old Alzheimer's disease patient with TREM2 (R47H) missense mutation.
Schröter F, Sleegers K, Cuyvers E, Bohndorf M, Wruck W, Van Broeckhoven C, Adjaye J
Stem cell research (2016) 173: 553-555. . **ICC**

Compartment-specific transcription factors orchestrate angiogenesis gradients in the embryonic brain.
Vasudevan A, Long JE, Crandall JE, Rubenstein JL, Bhide PG
Nature neuroscience (2008) 114: 429-39. . **IHC**

Selected General References

Pax 6: mastering eye morphogenesis and eye evolution.
Gehring WJ, Ikeo K
Trends in genetics : TIG (1999) 159: 371-7. .

Pax-6 expression in posthatch chick retina during and recovery from form-deprivation myopia.
Bhat SP, Rayner SA, Chau SC, Ariyasu RG
Developmental neuroscience (2004) 265-6: 328-35. .

Access the online factsheet including applicable protocols at https://sysy.com/product/153011 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera**: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies**: Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein.
  For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.