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Olig2

Cat.No. 292 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage		
IP: not tested yet ICC: 1: 500 IHC: 1: 200 up to 1: 500 IHC_P: 1: 500 Immunogen Synthetic peptide corresponding to AA 242 to 259 from mouse Olig2 (UniProt Id: Q9EQW6) Reactivity Reacts with: rat (G3V612), mouse (Q9EQW6).	•	Albumin and azide were added for stabilization. For reconstitution add 50 μ l H ₂ O 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!
Q9EQW6) Reactivity Reacts with: rat (G3V612), mouse (Q9EQW6).	Applications	IP: not tested yet ICC: 1: 500 IHC: 1: 200 up to 1: 500
	Immunogen	
	Reactivity	, , , , , , , , , , , , , , , , , , , ,

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

Background

Olig 2, also referred to as **BHLHB 1** and **PRKCBP 2**, is a transcription factor specific for the oligodendroglial lineage.

Oligodendrocytes are glia-cells that make and maintain the myelin of the central nervous system. The nuclei of these cells are in general smaller and have a more oval shape compared to nuclei from other cell types.

Selected References for 292 003

Peculiar protrusions along tanycyte processes face diverse neural and nonneural cell types in the hypothalamic parenchyma. Pasquettaz R, Kolotuev I, Rohrbach A, Gouelle C, Pellerin L, Langlet F

The Journal of comparative neurology (2021) 5293: 553-575. . IHC; tested species: mouse

GSK-3 β S9A overexpression leads murine hippocampal neural precursors to acquire an astroglial phenotype in vivo. Flor-García M, Ávila J, Llorens-Martín M

Developmental neurobiology (2021) 815: 710-723. . IHC; tested species: mouse

Selected General References

Stage-specific deletion of Olig2 conveys opposing functions on differentiation and maturation of oligodendrocytes. Mei F, Wang H, Liu S, Niu J, Wang L, He Y, Etxeberria A, Chan JR, Xiao L

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Olig2/Plp-positive progenitor cells give rise to Bergmann glia in the cerebellum.

Chung SH, Guo F, Jiang P, Pleasure DE, Deng W

Cell death & disease (2013) 4: e546. .

Transcription factor Olig2 defines subpopulations of retinal progenitor cells biased toward specific cell fates.

Hafler BP, Surzenko N, Beier KT, Punzo C, Trimarchi JM, Kong JH, Cepko CL

Proceedings of the National Academy of Sciences of the United States of America (2012) 10920: 7882-7..

Predominant expression of OLIG2 over ID2 in oligodendroglial tumors.

Mikami S, Hirose Y, Yoshida K, Kawase T, Ohnishi A, Nagashima K, Mukai M, Okada Y, Ikeda E

Virchows Archiv: an international journal of pathology (2007) 4505: 575-84..

Anti-human Olig2 antibody as a useful immunohistochemical marker of normal oligodendrocytes and gliomas. Yokoo H, Nobusawa S, Takebayashi H, Ikenaka K, Isoda K, Kamiya M, Sasaki A, Hirato J, Nakazato Y

The American journal of pathology (2004) 1645: 1717-25. .

OLIG2 as a specific marker of oligodendroglial tumour cells.

Marie Y, Sanson M, Mokhtari K, Leuraud P, Kujas M, Delattre JY, Poirier J, Zalc B, Hoang-Xuan K Lancet (London, England) (2001) 3589278: 298-300. .

Access the online factsheet including applicable protocols at https://sysy.com/product/292003 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 freezedried) 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 freezethaw cycles.
- Please refer to our tips and hints for subsequent storage of reconstituted antibodies and control peptides and proteins.