SYSY Antibodies

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Ctip2 C-terminus

Cat.No. 325 005; Polyclonal Guinea pig antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 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**: not recommended **IP**: not tested yet **ICC**: 1 : 500 **IHC**: 1 : 200 up to 1 : 500 **IHC-P**: 1 : 200
Immunogen	Recombinant protein corresponding to AA 541 to 812 from rat Ctip2 (UniProt Id: H9N1L3)
Reactivity	Reacts with: rat (H9N1L3), mouse (Q99PV8). Other species not tested yet.

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

Background

The **C**oup-**T**F**I** **i**nteracting **p**rotein **2** (**Ctip 2**), also referred to as **Bcl 11b**, is a zinc finger transcription factor that is expressed in postmitotic neurons.
Together with Satb 2, Coup-TFI, and Fezf2 it is involved in the fine tuned sequential formation and specification of the different excitatory neuron populations forming the definitive six-layered cortical structure.

Selected References for 325 005

Revisiting adult neurogenesis and the role of erythropoietin for neuronal and oligodendroglial differentiation in the hippocampus.
Hassouna I, Ott C, Wüstefeld L, Offen N, Neher RA, Mitkovski M, Winkler D, Sperling S, Fries L, Goebbels S, Vreja IC, et al.
Molecular psychiatry (2016) 2112: 1752-1767. . **IHC**

Retrosplenial inputs drive visual representations in the medial entorhinal cortex.
Dubanet O, Higley MJ
Cell reports (2024) 437: 114470. . **IHC; tested species: mouse**

Acetylcholine synergizes with netrin-1 to drive persistent firing in the entorhinal cortex.
Glasgow SD, Fisher TAJ, Wong EW, Lançon K, Feighan KM, Beamish IV, Gibon J, Séguéla P, Ruthazer ES, Kennedy TE
Cell reports (2024) 432: 113812. . **IHC; tested species: mouse**

CaMKIIα Expressing Neurons to Report Activity-Related Endogenous Hypoxia upon Motor-Cognitive Challenge.
Butt UJ, Hassouna I, Fernandez Garcia-Agudo L, Steixner-Kumar AA, Depp C, Barnkothe N, Zillmann MR, Ronnenberg A, Bonet V, Goebbels S, Nave KA, et al.
International journal of molecular sciences (2021) 226: . . **IHC; tested species: mouse**

Brain erythropoietin fine-tunes a counterbalance between neurodifferentiation and microglia in the adult hippocampus.
Fernandez Garcia-Agudo L, Steixner-Kumar AA, Curto Y, Barnkothe N, Hassouna I, Jähne S, Butt UJ, Grewe K, Weber MS, Green K, Rizzoli S, et al.
Cell reports (2021) 368: 109548. . **IHC; tested species: mouse**

Functional hypoxia drives neuroplasticity and neurogenesis via brain erythropoietin.
Wakhloo D, Scharkowski F, Curto Y, Javed Butt U, Bansal V, Steixner-Kumar AA, Wüstefeld L, Rajput A, Arinrad S, Zillmann MR, Seelbach A, et al.
Nature communications (2020) 111: 1313. . **IHC; tested species: mouse**

Selected General References

Unc5C and DCC act downstream of Ctip2 and Satb2 and contribute to corpus callosum formation.
Srivatsa S et al. Nat Commun (2014) PubMed:24739528

Ctip2-mediated Sp6 transcriptional regulation in dental epithelium-derived cells.
Adiningrat A et al. J. Med. Invest. (2014) PubMed:24705758

CTIP2 is a negative regulator of P-TEFb.
Cherrier T et al. Proc. Natl. Acad. Sci. U.S.A. (2013) PubMed:23852730

The CB(1) cannabinoid receptor drives corticospinal motor neuron differentiation through the Ctip2/Satb2 transcriptional regulation axis.
Díaz-Alonso J et al. J. Neurosci. (2012) PubMed:23175820

A dual function of Bcl11b/Ctip2 in hippocampal neurogenesis.
Simon R et al. EMBO J. (2012) PubMed:22588081

The Fezf2-Ctip2 genetic pathway regulates the fate choice of subcortical projection neurons in the developing cerebral cortex.
Chen B et al. Proc. Natl. Acad. Sci. U.S.A. (2008) PubMed:18678899

Access the online factsheet including applicable protocols at https://sysy.com/product/325005 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.