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 (FFPE)**: 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 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.