abcam

ab18465

Anti-Ctip2 antibody [25B6]

Anti-Ctip2 antibody [25B6] (ab18465) is a rat monoclonal antibody detecting Ctip2 in **Western Blot, Flow Cytometry, IHC-P, ICC/IF**. Suitable for **Human, Mouse**.

- Clone 25B6 is the most cited clone to Ctip2
- Over 840 publications
- Trusted since 2005

Key facts

Isotype	IgG2a
Host species	Rat
Storage buffer	pH: 7.5 Preservative: 0.02% Sodium azide Constituents: 0.87% Sodium chloride, 0.357% HEPES
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human BCL11B. The exact immunogen used to generate this antibody is proprietary information. Database link Q9C0K0
Clone number	25B6
Purification technique	Multi-step chromatography
Specificity	Detects 2 bands representing Ctip2 at about 120kD. Ctip2 is highly expressed in brain and in malignant T-cell lines derived from patients with adult T-cell leukemia/lymphoma. While we do not guarantee suitability of ab18465 for IHC-Fr, some customers have reported successful use in this application. See PMID: 24739528 for example.
Epitope	Between amino acids 1-150 of CTIP2.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	5 µg/mL
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	5 µg/mL
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

IHC-Fr

Not recommended

Species	Mouse
Dilution info	-
Notes	While we do not guarantee suitability of ab18465 for IHC-Fr, some customers have reported successful use in this application. See PMID: 24739528 for example.

Species	Human
Dilution info	-
Notes	While we do not guarantee suitability of ab18465 for IHC-Fr, some customers have reported successful use in this application. See PMID: 24739528 for example.

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells

Notes	ab18450 - Rat monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Human
Dilution info	1/500
Notes	-

Target data

See full target information BCL11B

Function	Key regulator of both differentiation and survival of T-lymphocytes during thymocyte development in mammals. Essential in controlling the responsiveness of hematopoietic stem cells to chemotactic signals by modulating the expression of the receptors CCR7 and CCR9, which direct the movement of progenitor cells from the bone marrow to the thymus (PubMed:27959755). Is a regulator of IL2 promoter and enhances IL2 expression in activated CD4(+) T-lymphocytes (PubMed:16809611). Tumor-suppressor that represses transcription through direct, TFCOUP2-independent binding to a GC-rich response element (By similarity). May also function in the P53-signaling pathway (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Anti-Ctip2 antibody [25B6] (ab18465) is a rat monoclonal antibody and is validated for use in Flow Cyt (Intra), ICC/IF, IHC-P and WB.

Anti-Ctip2 antibody [25B6] (ab18465) was first used in a scientific publication in 2001 and has been cited over 841 times in peer reviewed journals. It's performance in immunofluorescence and IHC in human and mouse samples is trusted by the scientific community.

Abcam's high quality validation processes ensure Anti-Ctip2 antibody [25B6] (ab18465) has high sensitivity and specificity.

Anti-Ctip2 antibody [25B6] (ab18465) has 35 independent reviews from customers.

Anti-Ctip2 antibody [25B6] (ab18465) specifically detects Ctip2 (UniProt ID: Q9C0K0; Molecular weight: 96kDa) and is sold in 100 µg selling sizes.

Antibody clone 25B6 is also available pre-conjugated to a variety of labels for your convenience - FITC (ab123449).

CTIP2, also known as BCL11B, is a transcription factor crucial in neuro research for its role in neural development and

differentiation. It is particularly important for the development of medium spiny neurons (MSNs) in the striatum, which are essential for motor control and are affected in conditions like Huntington's disease. CTIP2 regulates gene expression involved in neuronal differentiation, axon guidance and synaptic connectivity, making it vital for understanding the cellular architecture and function of the nervous system.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Ctip2 also known as Bcl11b is a transcription factor with a molecular mass of approximately 101 kDa. Researchers study Ctip2 for its critical role in gene regulation. It is highly expressed in the brain thymus and skin reflecting its diverse functional roles in different tissues. Ctip2 plays an important role in the development and differentiation of neurons as well as T-cells in the immune system. The ability to track its expression using ctip2 staining provides important insights into developmental biology.
Biological function summary	Ctip2 protein acts as an important regulator in various cellular processes such as immune function neural development and skin differentiation. As a part of a transcriptional complex it interacts with other proteins to modulate gene expression important for cell fate determination. This protein represses and activates target genes to ensure proper neuronal development and immune system maturation. The presence of Ctip2 marker helps in identifying specific cell lineages during development and differentiation studies.
Pathways	Ctip2 protein influences multiple biological pathways that are important for cellular differentiation and development. It is notably involved in the Notch signaling and Wnt signaling pathways which are vital for cell communication and developmental processes. In the context of these pathways Ctip2 interacts closely with other proteins such as TCF-1 and Gata3 which are also involved in differentiation processes. These interactions allow Ctip2 to maintain proper physiological functions by affecting precise gene networks.
Associated diseases and disorders	Ctip2 has been implicated in immune-related disorders and neurological conditions. Aberrant expression of Ctip2 is associated with T-cell malignancies which makes it a target of interest for therapeutic interventions. Its role in neuronal differentiation connects it to neurodevelopmental disorders including autism spectrum disorders. Interaction with proteins like Gata3 and TCF-1 highlights the potential of Ctip2 as a therapeutic target as these links could help in understanding and developing strategies to address these conditions.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

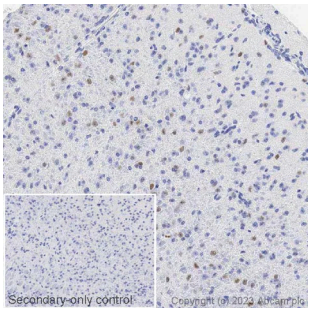
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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11 product images

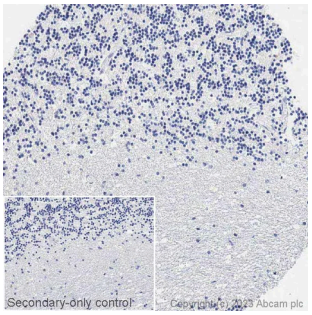


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse hippocampus using rat Anti-Ctip2 antibody

IHC image of Ctip2 staining in a section of formalin-fixed paraffin-embedded mouse hippocampus performed on a Leica Biosystems BOND® RX instrument. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab18465, 5ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

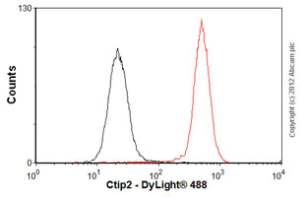


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human cerebellum using rat Anti-Ctip2 antibody

Negative control image: IHC image of Ctip2 staining in a section of formalin-fixed paraffin-embedded human cerebellum* performed on a Leica Biosystems BOND® RX instrument. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab18465, 5ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and

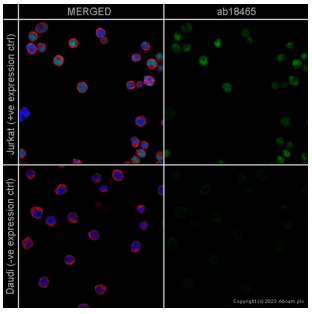
mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times. *Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre



Flow Cytometry - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Flow Cytometry staining of Jurkat cells using rat Anti-Ctip2 antibody

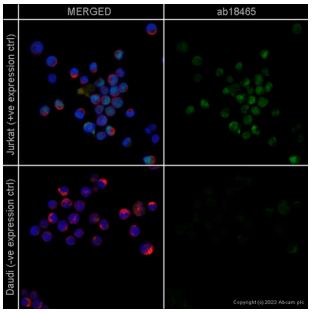
Overlay histogram showing Jurkat cells stained with ab18465 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab18465 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rat IgG (H+L) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was rat IgG (2µg/1x10^6 cells) used under the same conditions. Acquisition of >5000 events was performed.



Immunocytochemistry/ Immunofluorescence - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunocytochemistry/ Immunofluorescence staining using rat Anti-Ctip2 antibody

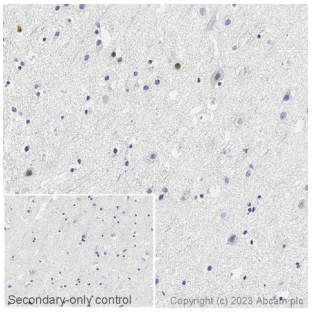
Immunofluorescence staining of Ctip2 using ab18465 in Jurkat cells (+ve expression control top panel) and Daudi cells (-ve expression control bottom panel). The cells were fixed with 4% formaldehyde (10 min) permeabilized with 0.1% Triton-X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab18465 at 0.2 µg/mL and ab6046 at 1 µg/mL overnight at +4°C followed by a further incubation at room temperature for 1h with Goat Anti-Rat IgG H&L (Alexa Fluor® 488) preadsorbed (ab150165) (shown in green) and Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) preadsorbed (ab150084) (shown in red) both at 1/1000 dilution. Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



Immunocytochemistry/ Immunofluorescence - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunocytochemistry/ Immunofluorescence staining using rat Anti-Ctip2 antibody

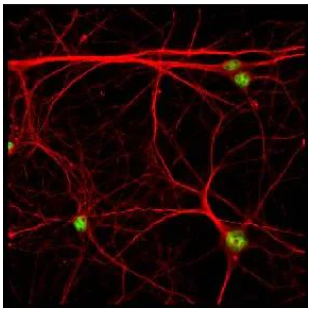
Immunofluorescence staining of Ctip2 using ab18465 in Jurkat cells (+ve expression control top panel) and Daudi cells (-ve expression control bottom panel). The cells were fixed with 100% methanol (5 min) permeabilized with 0.1% Triton-X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab18465 at 0.2 µg/mL and ab6046 at 1 µg/mL overnight at +4°C followed by a further incubation at room temperature for 1h with Goat Anti-Rat IgG H&L (Alexa Fluor® 488) preadsorbed (ab150165) (shown in green) and Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) preadsorbed (ab150084) (shown in red) both at 1/1000 dilution. Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human hippocampus using rat Anti-Ctip2 antibody

IHC image of Ctip2 staining in a section of formalin-fixed paraffin-embedded human hippocampus* performed on a Leica Biosystems BOND® RX instrument. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab18465, 5ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody. For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times. *Tissue obtained from the Human Research Tissue Bank, supported by the NIHR Cambridge Biomedical Research Centre

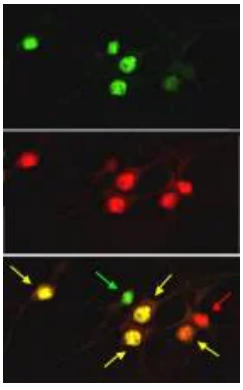


Immunocytochemistry/ Immunofluorescence - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunocytochemistry/ Immunofluorescence staining of mouse hippocampal neurons using rat Anti-Ctip2 antibody

Neonatal Mouse Hippocampal Neurons (Harvested at P1 grown 5d in culture on glial cell feeder layer).

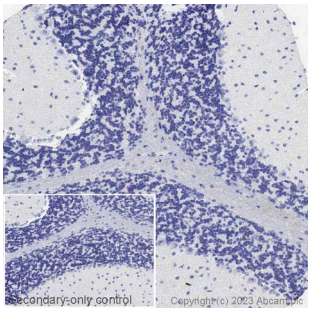
Red is beta tubulin staining.
Green is ab18465.



Immunocytochemistry/ Immunofluorescence - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunocytochemistry/ Immunofluorescence staining of mouse hippocampal neurons using rat Anti-Ctip2 antibody

Neonatal mouse hippocampal neurons stained with ab18465 (top panel - green) and Ctip1 antibody (middle - red). Bottom panel is overlay of ab18465 and Ctip1 antibody staining - yellow indicates co-localisation green is ab18465 alone and red is Ctip1 antibody alone.



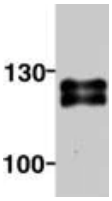
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cerebellum using rat Anti-Ctip2 antibody

Negative control image: IHC image of Ctip2 staining in a section of formalin-fixed paraffin-embedded mouse cerebellum performed on a Leica Biosystems BOND® RX instrument. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20mins. The section was then incubated with ab18465, 5ug/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted

with DPX. The inset secondary-only control image is taken from an identical assay without primary antibody.

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Western blot - Anti-Ctip2 antibody [25B6] (ab18465)

Ctip2 Western blot staining using rat Anti-Ctip2 antibody

Western blot using ab18465 on nuclear extract from Jurkat cells immunoprecipitated with anti-Sir2 antibody.

Two bands are seen which may correspond to two CTIP2 transcripts present in Jurkat cells as previously reported (Bernard et al. 2001).

Western blot using ab18465 on nuclear extract from Jurkat cells immunoprecipitated with anti-Sir2 antibody. Two bands are seen which may correspond to two CTIP2 transcripts present in Jurkat cells as previously reported (Bernard et al. 2001).
All lanes:
Western blot - Anti-Ctip2 antibody [25B6] (ab18465)

Predicted band size: 96 kDa



This image is courtesy of an Anonymous customer review.

Western blot - Anti-Ctip2 antibody [25B6] (ab18465)

All lanes:
Western blot - Anti-Ctip2 antibody [25B6] (ab18465) at 1/500 dilution

Lanes 1 - 2:
Mouse brain tissue lysate at 1.5 µg

Lane 3:
Mouse brain tissue lysate at 3 µg

Secondary

All lanes:
IRDYE 680-conjugated Donkey Anti-Rat polyclonal. at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 96 kDa

Observed band size: 100 kDa, 110 kDa

Exposure time: 10min

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.