abcam

ab108978

Anti-Tcl1 antibody [EPR3949]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR3949
Purification technique	Affinity purification Protein A
Concentration	0.389 - 0.39 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/700
Notes	Perform antigen retrieval Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/250
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/400
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. Unpurified format: 1/100 - 1/1000.

Target data

See full target information TCL1A

Function	Enhances the phosphorylation and activation of AKT1, AKT2 and AKT3. Promotes nuclear translocation of AKT1. Enhances cell proliferation, stabilizes mitochondrial membrane potential and promotes cell survival.

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

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	The TCL1 (T-cell leukemia/lymphoma protein 1) also known as TCL1A is an important protein involved in cellular processes. TCL1 has a molecular mass of approximately 14 kDa and plays roles in signal transduction pathways. The protein is expressed in various tissues including the thymus lymph nodes and spleen. TCL1 is particularly important in T-cell development and function. It functions at a mechanistic level by interacting with other proteins thereby influencing cell signaling pathways essential for lymphocyte proliferation and survival.
Biological function summary	TCL1 enhances the activity of the AKT kinase an important component of cellular signaling that modulates cell growth and survival. This protein does not form any large complex but acts through AKT phosphorylation. The activation of TCL1 leads to the promotion of cell proliferation and prevention of apoptosis especially in lymphocytes. The regulation of these cellular activities by TCL1 suggests its important role in the development of the immune system.

Pathways	The AKT signaling pathway is significantly influenced by TCL1 controlling cell growth division and apoptosis. The interaction of TCL1 with AKT activates the PI3K/AKT pathway an important signal transduction pathway promoting survival and growth in response to extracellular signals. TCL1 indirectly affects the mTOR signaling pathway through its modulation of AKT affecting protein synthesis and cell metabolism. Both pathways emphasize the broad role of TCL1 in maintaining normal cellular functions and growth regulation.
Associated diseases and disorders	The overexpression or mutation of TCL1 can lead to malignancies such as T-cell leukemia and B-cell lymphoma. In these cancers abnormal TCL1 activity results in enhanced cell survival and proliferation contributing to tumorigenesis. In leukemia TCL1 directly interacts with AKT and its dysregulation becomes pathogenic. Research continues to investigate the involvement of TCL1 in oncogenesis and how its association with AKT and other signaling molecules like mTOR contributes to cancer progression. Understanding these interactions could potentially offer new therapeutic targets for treating related malignancies.

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

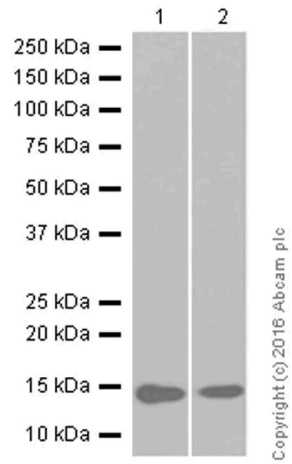
We do not recommend this combination. It is not covered by our product promise.

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.

12 product images



Western blot - Anti-Tcl1 antibody [EPR3949] (ab108978)

Blocking buffer: 5% NFDM/TBST
Diluting buffer: 5% NFDM/TBST

All lanes:
Western blot - Anti-Tcl1 antibody [EPR3949] (ab108978) at 1/1000 dilution

Lane 1:
Ramos (human Burkitt's lymphoma) whole cell lysate at 20 µg

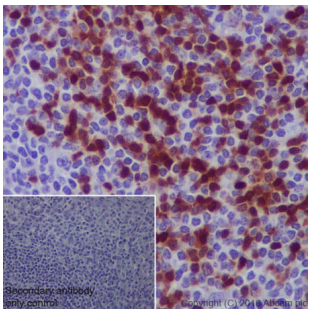
Lane 2:
Daudi (human Burkitt's lymphoma) whole cell lysate at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

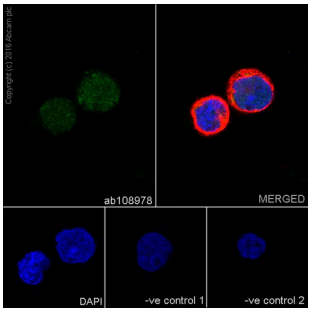
Predicted band size: 103 kDa, 13 kDa, 43 kDa

Observed band size: 13 kDa, 27 kDa, 43 kDa



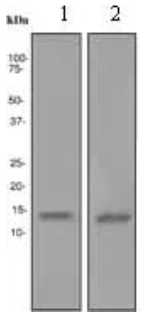
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 staining Tcl1 in human tonsil tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with paraformaldehyde and antigen retrieval was by heat mediation in a EDTA buffer. Samples were incubated with primary antibody at a dilution of 1/700. A goat anti-rabbit IgG H&L (HRP) ab97051 was used as the secondary antibody at 1/500.
Negative control 1: PBS in place of primary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 staining Tcl1 in Jurkat (human acute T cell leukemia) cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 4% Paraformaldehyde and permeabilized with 0.1% Triton X-100. Samples were incubated with primary antibody at a dilution of 1/200. A goat anti rabbit IgG (Alexa Fluor® 488) (ab150077) was used as the secondary antibody at 1/1000. ab7291 and ab150120 were used as counterstains for primary antibody ab108978 and secondary antibody ab150077 respectively and DAPI was used as a nuclear counterstain.
Negative control 1: Rabbit primary antibody and anti-mouse secondary antibody (ab150120)
Negative control 2: Mouse primary antibody (ab7291) and anti-rabbit secondary antibody (ab150077)



Western blot - Anti-Tcl1 antibody [EPR3949] (ab108978)

All lanes:
Western blot - Anti-Tcl1 antibody [EPR3949] (ab108978) at 1/1000 dilution

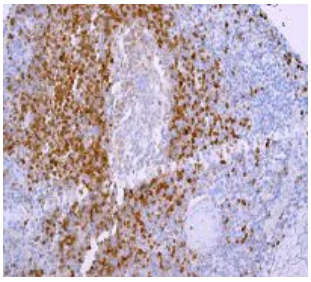
Lane 1:
Daudi cell lysate at 10 µg

Lane 2:
Ramos cell lysates at 10 µg

Secondary

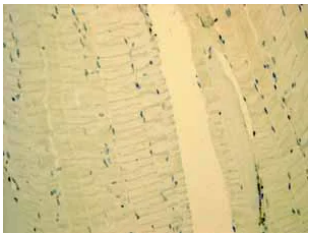
All lanes:
Standard HRP labelled goat anti-goat. at 1/2000 dilution

Predicted band size: 13 kDa



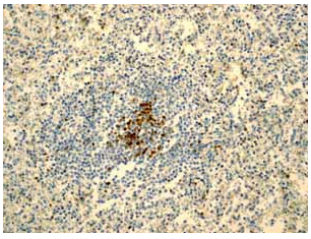
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue using ab108978. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

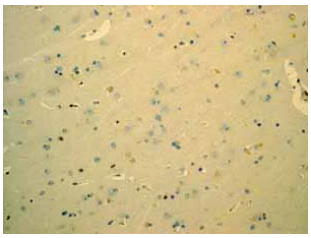
ab108978 showing negative staining in Skeletal muscle tissue. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 showing positive staining in Normal spleen tissue.

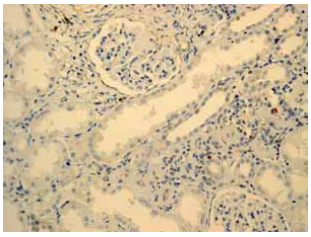
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 showing negative staining in Normal brain tissue.

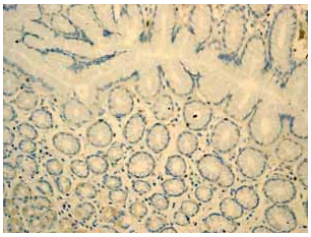
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 showing negative staining in Normal kidney tissue.

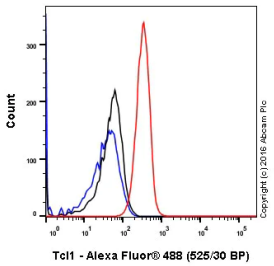
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 showing negative staining in Normal stomach tissue.

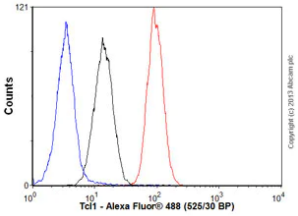
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-Tcl1 antibody [EPR3949] (ab108978)

ab108978 staining Tcl1 in the human cell line Ramos (human Burkitt's lymphoma) by intracellular flow cytometry. Cells were fixed with 4% paraformaldehyde and the sample was incubated with the primary antibody at a dilution of 1/400. A goat anti rabbit IgG (Alexa Fluor® 488) at a dilution of 1/2000 was used as the secondary antibody.
Isoytype control: Rabbit monoclonal IgG (Black)

Unlabelled control: Cell without incubation with primary antibody and secondary antibody (Blue)



Flow Cytometry (Intracellular) - Anti-Tcl1 antibody [EPR3949] (ab108978)

Tcl1 Flow Cytometry (Intracellular) staining using rabbit Anti-Tcl1 antibody

Overlay histogram showing Ramos cells stained with ab108978 (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 (ab108978 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This antibody gave a positive signal in Ramos cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.