abcam

ab32368

Anti-Tec antibody [Y398]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	Y398
Purification technique	Affinity purification Protein A
Epitope	ab32368 reacts with an epitope located in the PH domain of Tec.
Concentration	0.163 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/2000 - 1/5000
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100 - 1/500
Notes	-

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/30 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information TEC

Function

Non-receptor tyrosine kinase that contributes to signaling from many receptors and participates as a signal transducer in multiple downstream pathways, including regulation of the actin cytoskeleton. Plays a redundant role to ITK in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. Required for TCR-dependent IL2 gene induction. Phosphorylates DOK1, one CD28-specific substrate, and contributes to CD28-signaling. Mediates signals that negatively regulate IL2RA expression induced by TCR cross-linking. Plays a redundant role to BTK in BCR-signaling for B-cell development and activation, especially by phosphorylating STAP1, a BCR-signaling protein. Required in mast cells for efficient cytokine production. Involved in both growth and differentiation mechanisms of myeloid cells through activation by the granulocyte colony-stimulating factor CSF3, a critical cytokine to promoting the growth, differentiation, and functional activation of myeloid cells. Participates in platelet signaling downstream of integrin activation. Cooperates with JAK2 through reciprocal phosphorylation to mediate cytokine-driven activation of FOS transcription. GRB10, a negative modifier of the FOS activation pathway, is another substrate of TEC. TEC is involved in G protein-coupled receptor- and integrin-mediated signalings in blood platelets. Plays a role in hepatocyte proliferation and liver regeneration and is involved in HGF-induced ERK signaling pathway. TEC also regulates FGF2 unconventional secretion (endoplasmic reticulum (ER)/Golgi-independent mechanism) under various physiological conditions through phosphorylation of FGF2 'Tyr-215'. May also be involved in the regulation of osteoclast differentiation.

Storage

Shipped at conditions	Conditional Ambient

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

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	Tec also known as Tec protein tyrosine kinase functions as a non-receptor tyrosine kinase involved in signal transduction. Its molecular mass is approximately 72 kDa. Tec is expressed predominantly in hematopoietic cells such as B cells T cells and myeloid lineage cells. This protein plays a significant role in mediating cellular communication by transferring phosphate groups from ATP to specific tyrosine residues on target proteins.
Biological function summary	Tec influences cellular processes like proliferation differentiation and survival. Tec belongs to the Tec kinase family which also includes Btk Itk Rlk and Bmx. Though Tec does not form permanent complexes it interacts dynamically with various signaling proteins. These interactions allow Tec to modulate immune cell development and function significantly impacting the adaptive immune response.
Pathways	Tec is an integral part of the B-cell receptor (BCR) signaling pathway and the PI3K/Akt signaling pathway. Upon activation of BCR Tec aids in signal propagation leading to B cell activation and proliferation. Tec operates synergistically with proteins like Src family kinases leading to the activation of downstream signaling pathways. The protein also facilitates the Akt pathway which controls cell growth and survival by interacting with phosphatidylinositol 3-kinase (PI3K).

Associated diseases and disorders	Tec links to immunodeficiencies and cancers such as leukemia. Dysfunctional Tec signaling can impair immune responses contributing to conditions like X-linked agammaglobulinemia a disorder often connected to mutations in Bruton's tyrosine kinase (Btk). Overactive Tec signaling may promote leukemogenesis linking Tec to leukemias where it cooperates with proteins such as STAT5 which is involved in cell growth and survival pathways.

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

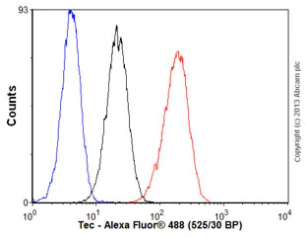
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

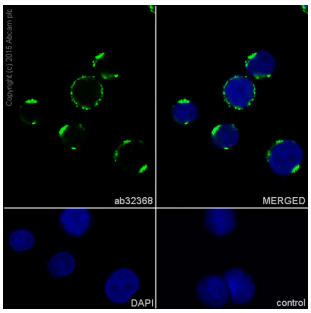


Flow Cytometry (Intracellular) - Anti-Tec antibody [Y398] (ab32368)

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

Overlay histogram showing Jurkat (Human T cell leukemia cell line from peripheral blood) cells stained with ab32368 (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 (ab32368, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluorr® 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) (1µg/1x10^6 cells) used under the same conditions. Unlabeled sample (blue line)

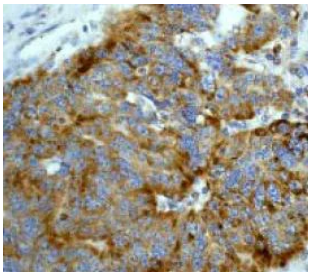
was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Immunocytochemistry/ Immunofluorescence - Anti-Tec antibody [Y398] (ab32368)

Tec Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Tec antibody

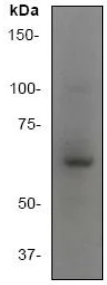
Immunocytochemistry/Immunofluorescence analysis of Jurkat (human acute T cell leukemia) labeling Tec with purified ab32368 at 1/500. Cells were fixed with 100% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).
Control: PBS only



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Tec antibody [Y398] (ab32368)

Tec Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Tec antibody

ab32368 at a 1/50 dilution staining human ovary carcinoma tissue by immunohistochemistry, paraffin embedded tissue.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-Tec antibody [Y398] (ab32368)

All lanes:
Western blot - Anti-Tec antibody [Y398] (ab32368) at 1/10000 dilution

All lanes:
Jurkat (Human T cell leukemia cell line from peripheral blood) cell lysate

Predicted band size: 73 kDa

Observed band size: 66 kDa

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