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TEC Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1314a

Product Information

Application	WB, E
Primary Accession	P42680
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3A5
Isotype	IgG1
Calculated MW	73581
Description	TEC, it belongs to the Tec family of non-receptor protein-tyrosine kinases containing a pleckstrin homology domain. Tec family kinases are involved in the intracellular signaling mechanisms of cytokine receptors, lymphocyte surface antigens, heterotrimeric G-protein coupled receptors, and integrin molecules. They are also key players in the regulation of the immune functions. Tec kinase is an integral component of T cell signaling and has a distinct role in T cell activation. This gene may be associated with myelodysplastic syndrome.
Immunogen	Purified recombinant fragment of TEC expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	7006
Other Names	Tyrosine-protein kinase Tec, 2.7.10.2, TEC, PSCTK4
Dilution	WB~~1/500 - 1/2000 E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	TEC Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TEC
Synonyms	PSCTK4

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.
Cellular Location	Cytoplasm. Cell membrane; Peripheral membrane protein. Cytoplasm, cytoskeleton. Note=Following B-cell or T-cell receptors activation by antigen, translocates to the plasma membrane through its PH domain. Thrombin and integrin engagement induces translocation of TEC to the cytoskeleton during platelet activation. In cardiac myocytes, assumes a diffuse intracellular localization under basal conditions but is recruited to striated structures upon various stimuli, including ATP (By similarity).
Tissue Location	Expressed in a wide range of cells, including hematopoietic cell lines like myeloid, B-, and T-cell lineages

References

1. Blood. 2000 Nov 15;96(10):3406-13. 2. J Biol Chem. 1999 Jan 8;274(2):607-17. 3. Blood. 1998 Feb 1;91(3):940-8.

Images

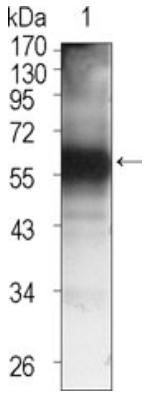

Figure 1: Western blot analysis using TEC mouse mAb against TEC (aa90-240)-hIgGFc transfected HEK293 cell lysate (1).

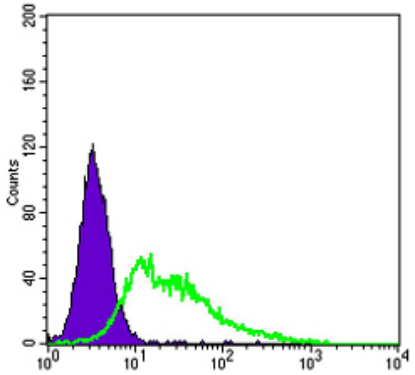

Figure 3: Flow cytometric analysis of HepG2 cells using KDR mouse mAb (green) and negative control (purple).

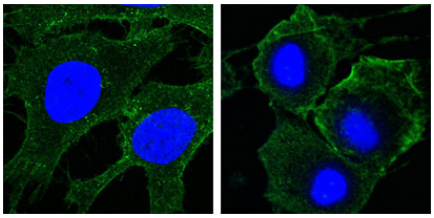

Figure 2: Confocal immunofluorescence analysis of Hela (left) and HepG2 (right) cells using KDR mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

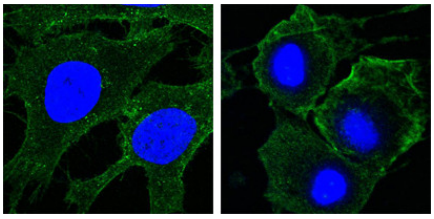

Figure 2: Confocal immunofluorescence analysis of Hela (left) and HepG2 (right) cells using anti-KDR monoclonal antibody (green). Blue: DRAQ5 fluorescent DNA dye.