Datasheet for ABIN674649

anti-TEK antibody (AA 401-550)

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Overview

Quantity:	100 µL
Target:	TEK
Binding Specificity:	AA 401-550
Reactivity:	Human, Mouse, Rat, Cow
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This TEK antibody is un-conjugated
Application:	ELISA, Flow Cytometry (FACS), Immunofluorescence (Cultured Cells) (IF (cc)), Immunofluorescence (Paraffin-embedded Sections) (IF (p)), Immunohistochemistry (Frozen Sections) (IHC (fro))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human Tie2
Isotype:	IgG
Cross-Reactivity:	Cow, Human, Mouse, Rat
Predicted Reactivity:	Cow,Pig,Horse
Purification:	Purified by Protein A.

Target Details

Target:	TEK

Target Details

Alternative Name:	TIE2/CD202b (TEK Products)
Background:	Synonyms: TIE2, VMCM, TIE-2, VMCM1, CD22B, Angiopoietin-1 receptor, Endothelial tyrosine kinase, Tunica interna endothelial cell kinase, Tyrosine kinase with Ig and EGF homology domains-2, Tyrosine-protein kinase receptor TEK, Tyrosine-protein kinase receptor TIE-2, hTIE2, p14 TEK, TEK Background: Tyrosine-protein kinase that acts as cell-surface receptor for ANGPT1, ANGPT2 and ANGPT4 and regulates angiogenesis, endothelial cell survival, proliferation, migration, adhesion and cell spreading, reorganization of the actin cytoskeleton, but also maintenance of vascular quiescence. Has anti-inflammatory effects by preventing the leakage of proinflammatory plasma proteins and leukocytes from blood vessels. Required for normal angiogenesis and heart development during embryogenesis. Required for post-natal hematopoiesis. After birth, activates or inhibits angiogenesis, depending on the context. Inhibits angiogenesis and promotes vascular stability in quiescent vessels, where endothelial cells have tight contacts. In quiescent vessels, ANGPT1 oligomers recruit TEK to cell-cell contacts, forming complexes with TEK molecules from adjoining cells, and this leads to preferential activation of phosphatidylinositol 3-kinase and the AKT1 signaling cascades. In migrating endothelial cells that lack cell-cell adhesions, ANGT1 recruits TEK to contacts with the extracellular matrix, leading to the formation of focal adhesion complexes, activation of PTK2/FAK and of the downstream kinases MAPK1/ERK2 and MAPK3/ERK1, and ultimately to the stimulation of sprouting angiogenesis. ANGPT1 signaling triggers receptor dimerization and autophosphorylation at specific tyrosine residues that then serve as binding sites for scaffold proteins and effectors. Signaling is modulated by ANGPT2 that has lower affinity for TEK, can promote TEK autophosphorylation in the absence of ANGPT1, but inhibits ANGPT1-mediated signaling by competing for the same binding site. Signaling is also modulated by formation of heterodimers with TIE1, and by proteolytic processing that gives rise to a soluble TEK extracellular domain. The soluble extracellular domain modulates signaling by functioning as decoy receptor for angiopoietins. TEK phosphorylates DOK2, GRB7, GRB14, PIK3R1, SHC1 and TIE1.
Gene ID:	7010
UniProt:	Q02763
Pathways:	RTK Signaling, Growth Factor Binding

Application Details

Application Notes:	WB 1:300-5000

Application Details

	ELISA 1:500-1000
	FCM 1:20-100
	IHC-P 1:200-400
	IHC-F 1:100-500
	IF(IHC-P) 1:50-200
	IF(IHC-F) 1:50-200
	IF(ICC) 1:50-200

Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 μg/μL
Buffer:	0.01M TBS(pH 7.4) with 1 % BSA, 0.02 % Proclin300 and 50 % Glycerol.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.
Expiry Date:	12 months

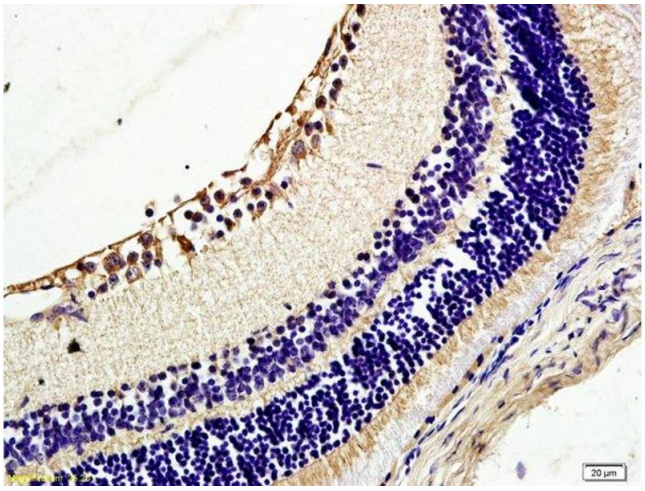
Publications

Product cited in:	Li, Liu, Liu, Wang, Zhang, Chen, Hui: "Expression of angiopoietins in central nervous system hemangioblastomas is associated with cyst formation." in: **Neuroscience letters**, Vol. 639, pp. 120-125, (2017) (PubMed). Xiang, Hu, Shen, Liu, Hua, Zan, Zu, Cui, Ye: "Bone marrow mesenchymal stem cells-conditioned medium enhances vascular remodeling after stroke in type 2 diabetic rats." in: **Neuroscience letters**, Vol. 644, pp. 62-66, (2017) (PubMed). Tekari, Chan, Sakai, Grad, Gantenbein: "Angiopoietin-1 receptor Tie2 distinguishes multipotent differentiation capability in bovine coccygeal nucleus pulposus cells." in: **Stem cell research & therapy**, Vol. 7, Issue 1, pp. 75, (2016) (PubMed).

Publications

Zhao, Hu, Xiang, Gu, Jin, Hua, Zhang, Liu, Zan, Zhang, Zu, Yang, Shi, Zhu, Xu, Cui, Ye: "Intranasal administration of human umbilical cord mesenchymal stem cells-conditioned medium enhances vascular remodeling after stroke." in: **Brain research**, (2015) (PubMed).

Images



Immunohistochemistry

Image 1. Formalin-fixed and paraffin embedded rat retina tissue labeled with Anti TIE2/CD202b Polyclonal Antibody, Unconjugated (ABIN674649) at 1:200 followed by conjugation to the secondary antibody and DAB staining