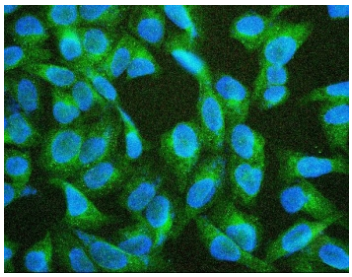
TIE2 Antibody / TEK tyrosine kinase (RQ5554)

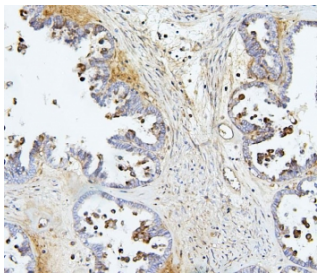
Catalog No.	Formulation	Size
RQ5554	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

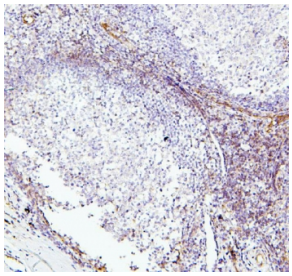
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	Q02763
Applications	Western blot: 0.25-0.5ug/ml Immunohistochemistry (FFPE): 1-2ug/ml Immunofluorescence: 2-4ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This TIE2 antibody is available for research use only.



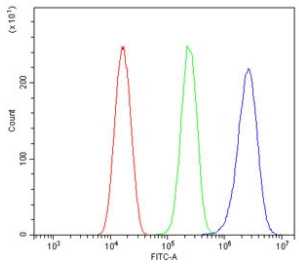
Immunofluorescence analysis of TIE2 / TEK tyrosine kinase antibody in human U-2 OS cells. FFPE human U-2 OS sections show cytoplasmic and membranous green fluorescence consistent with TIE2 expression, while nuclei are counterstained with DAPI (blue). Signal appears distributed throughout the cytoplasm with peripheral accentuation suggestive of membrane-associated localization. Heat induced epitope retrieval was performed in 10 mM citrate buffer, pH 6.0, by boiling for 20 minutes followed by cooling prior to antibody incubation.



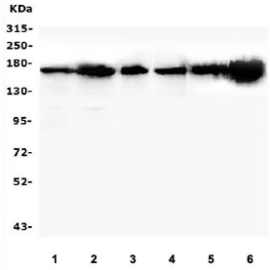
Immunohistochemistry analysis of TIE2 / TEK tyrosine kinase antibody in human ovarian cancer tissue. FFPE human ovarian carcinoma sections demonstrate HRP-DAB brown staining primarily in vascular endothelial cells within the tumor stroma, with membranous and cytoplasmic signal highlighting microvascular structures. Tumor epithelial cells show minimal to weak staining compared to endothelial components. Nuclear hematoxylin counterstain is visible in blue. Heat induced epitope retrieval was performed in 10 mM citrate buffer, pH 6.0, by boiling tissue sections for 20 minutes followed by cooling prior to antibody incubation.



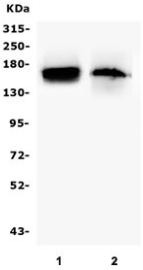
IHC staining of FFPE human tonsil with TIE2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



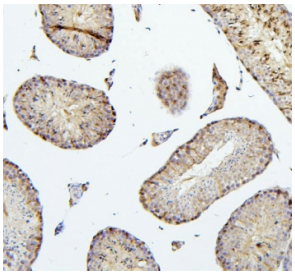
Flow cytometry testing of human HeLa cells with TIE2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TIE2 antibody.



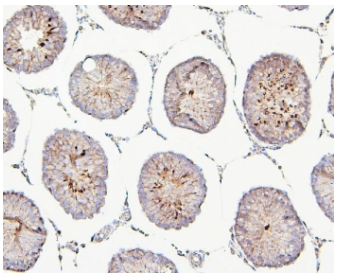
Western blot testing of human 1) HeLa, 2) U-87 MG, 3) U-2 OS, 4) A431, 5) PC-3 and 6) HL60 lysate with TIE2 antibody. Predicted molecular weight: ~126 kDa but may be observable at 130-165 kDa.



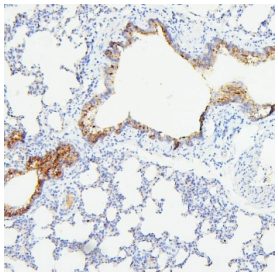
Western blot testing of mouse 1) lung and 2) Neuro-2a lysate with TIE2 antibody. Predicted molecular weight: ~126 kDa but may be observable at 130-165 kDa.



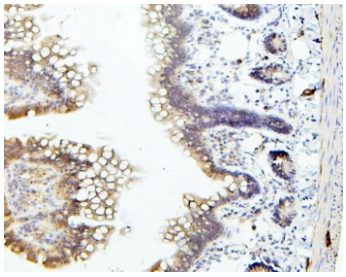
IHC staining of FFPE mouse testis with TIE2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



IHC staining of FFPE rat testis with TIE2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



IHC staining of FFPE rat lung with TIE2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.



IHC staining of FFPE rat intestine with TIE2 antibody. HIER: boil tissue sections in pH6, 10mM citrate buffer, for 20 min and allow to cool before testing.

Description

TIE2 antibody, also known as TEK tyrosine kinase antibody, recognizes a receptor tyrosine kinase encoded by the TEK gene. This protein is commonly referred to as TIE2, Tunica interna endothelial cell kinase, and CD202b in the literature. TIE2 is a transmembrane receptor tyrosine kinase primarily expressed in vascular endothelial cells, where it regulates angiogenesis, vascular stability, and endothelial cell survival.

TIE2 belongs to the receptor tyrosine kinase family and contains extracellular immunoglobulin-like domains, epidermal growth factor-like repeats, fibronectin type III domains, a single transmembrane region, and an intracellular kinase domain. Ligand binding by angiopoietins, particularly Angiopoietin-1 and Angiopoietin-2, induces receptor dimerization and autophosphorylation, triggering downstream signaling pathways including PI3K-AKT and MAPK cascades that promote endothelial cell survival and vessel maturation.

TEK tyrosine kinase plays a central role in embryonic vascular development and postnatal angiogenesis. It is highly expressed in endothelial cells lining blood vessels and is critical for maintaining vascular quiescence and integrity. Dysregulation of TIE2 signaling contributes to pathological angiogenesis observed in cancer, inflammation, diabetic retinopathy, and vascular malformations. Activating mutations in TEK have been linked to inherited venous malformations, underscoring its importance in vascular biology.

In oncology research, TIE2 antibody is frequently used to study tumor-associated angiogenesis and endothelial cell signaling within the tumor microenvironment. Because of its endothelial-restricted expression pattern, TEK tyrosine kinase antibody serves as a useful marker for vascular structures in tissue sections. TIE2 is predominantly localized to the plasma membrane of endothelial cells, with activated forms also detected in the cytoplasmic compartment following receptor internalization. A TIE2 antibody can be used in research applications to evaluate TEK expression and vascular signaling dynamics in relevant experimental models.

Application Notes

Optimal dilution of the TIE2 antibody should be determined by the researcher.

Immunogen

A human recombinant protein (amino acids A23-R616) was used as the immunogen for the TIE2 antibody.

Storage

After reconstitution, the TIE2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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