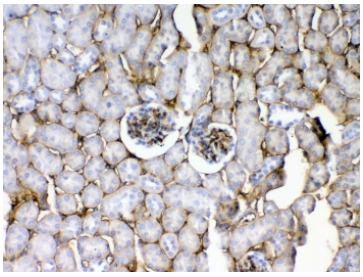
CD105 Antibody / Endoglin Cross-Species Detection Antibody (Rabbit Polyclonal) (R32935)

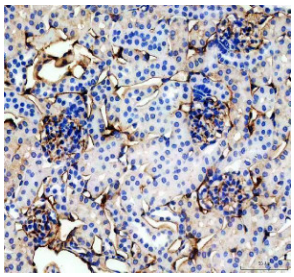
Catalog No.	Formulation	Size
R32935	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

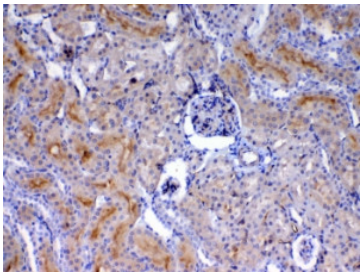
Availability	1-3 business days
Species Reactivity	Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q63961
Localization	Cell surface, cytoplasmic
Applications	Western Blot: 0.5-1ug/ml IHC (FFPE): 1-2ug/ml Direct ELISA (recombinant mouse protein): 0.1-0.5ug/ml (BSA-free format available)
Limitations	This CD105 Antibody / Endoglin Cross-Species Detection Antibody is available for research use only.



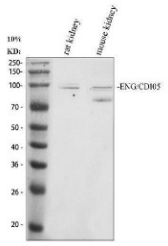
CD105 Antibody Mouse Kidney IHC. Immunohistochemistry analysis of FFPE mouse kidney tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining in endothelial cells lining renal vasculature, including vessels associated with glomerular and interstitial regions, consistent with Endoglin / CD105 expression as a vascular marker and supporting cross-species detection in mouse tissue, while surrounding tubular epithelial cells show minimal staining; nuclei are counterstained blue. HIER: steam tissue sections in pH 6 citrate buffer for 20 min and allow to cool prior to testing.



CD105 Antibody Mouse Kidney Tissue IHC. IHC staining of FFPE mouse kidney tissue using CD105 antibody at 2 ug/ml. Heat-induced epitope retrieval was performed in pH8 EDTA buffer before incubation with the primary antibody, followed by an HRP-conjugated secondary antibody and DAB chromogen. Distinct membranous staining is observed in vascular endothelial cells throughout the kidney, with little staining of the surrounding renal parenchyma, consistent with the established endothelial expression pattern of Endoglin (CD105). This result demonstrates that CD105 antibody, an Endoglin Cross-Species Detection antibody, is suitable for immunohistochemical detection of endothelial cells in mouse tissue.



CD105 Antibody Rat Kidney IHC. Immunohistochemistry analysis of FFPE rat kidney tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining in endothelial cells lining glomerular and peritubular capillary structures, consistent with Endoglin / CD105 expression as an endothelial-associated protein, supporting cross-species detection in rat tissue; nuclei are counterstained blue. HIER: steam sections in pH 6 citrate buffer for 20 min and allow to cool prior to testing.



CD105 Antibody Mouse and Rat Kidney WB. Western blot analysis of rat and mouse kidney lysates using CD105 antibody. Lane 1: rat kidney. Lane 2: mouse kidney. A predominant immunoreactive band is detected at approximately 95 kDa in both tissue lysates, with an additional lower-molecular-weight band visible in the mouse sample. Although the predicted molecular weight of CD105 (Endoglin) is approximately 70 kDa, the protein commonly migrates at a higher apparent molecular weight due to extensive N-linked glycosylation. These results demonstrate that CD105 antibody, an Endoglin Cross-Species Detection antibody, reliably detects endogenous CD105 in both rat and mouse kidney by Western blot.

Description

Endoglin (ENG), also known as CD105, is a transmembrane glycoprotein expressed on endothelial cells where it functions as an important regulator of angiogenesis and vascular signaling. CD105 Antibody / Endoglin Cross-Species Detection Antibody (Rabbit Polyclonal) targets this protein and enables detection across multiple species, supporting studies of vascular biology in diverse experimental models. CD105 antibody, also referred to as Endoglin antibody and ENG antibody in the literature, recognizes an endothelial-associated protein widely used in research on angiogenesis and tumor vascularization.

Functionally, Endoglin plays a central role in transforming growth factor beta (TGF-beta) signaling pathways, regulating endothelial cell proliferation, migration, and vascular remodeling. It acts as a co-receptor within the TGF-beta receptor complex and contributes to the control of angiogenic processes. CD105 expression is elevated in proliferating endothelial cells, particularly within tumor-associated vasculature, making it a widely used marker for studying neovascularization and vascular remodeling.

As a rabbit polyclonal reagent, this antibody recognizes multiple epitopes on the Endoglin protein, supporting detection across species including mouse and rat in addition to human samples. This broader epitope recognition facilitates consistent detection in western blot and immunohistochemistry applications, even when protein conformation or expression levels vary between species or tissue types. In these contexts, CD105 is typically observed as a membrane-associated protein on endothelial cells within vascular structures.

Expression of CD105 is most prominent in endothelial cells lining blood vessels across multiple tissues, including liver, kidney, and spleen, and is particularly enriched in areas of active angiogenesis. In tumor tissues, CD105-positive endothelial cells are associated with increased vascular density and tumor progression. The ENG gene is located on

chromosome 9q34.11 and plays a critical role in maintaining vascular integrity, with mutations linked to hereditary hemorrhagic telangiectasia.

Structurally, Endoglin is a homodimeric membrane protein composed of a large extracellular domain, a single transmembrane region, and a short cytoplasmic tail involved in intracellular signaling. It interacts with components of the TGF-beta receptor complex and influences downstream signaling pathways that regulate endothelial cell function and vascular homeostasis. Endoglin may also co-localize with other vascular markers involved in angiogenic signaling pathways.

Altered CD105 expression is associated with pathological conditions involving abnormal angiogenesis, including cancer, cardiovascular disease, and inflammatory disorders. In oncology, increased Endoglin expression correlates with tumor vascularization and disease progression. In inflammatory conditions, CD105-positive endothelial cells contribute to tissue repair and immune cell trafficking.

Supported by cross-species detection in western blot and immunohistochemistry applications, this antibody provides reliable identification of CD105 / Endoglin across multiple experimental systems. A CD105 antibody is suitable for detecting this endothelial-associated protein in studies of angiogenesis, vascular biology, and cross-species protein expression. For broader detection of CD105 as an endothelial marker across applications, see our CD105 antibody.

Application Notes

Optimal dilution of the CD105 Antibody / Endoglin Cross-Species Detection Antibody Antibody should be determined by the researcher.

Immunogen

A recombinant mouse protein corresponding to amino acids E27-L226 was used as the immunogen for the CD105 antibody.

Storage

After reconstitution, the CD105 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

Endoglin antibody, ENG antibody, CD105 polyclonal antibody, Endoglin cross-species antibody, ENG WB antibody

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