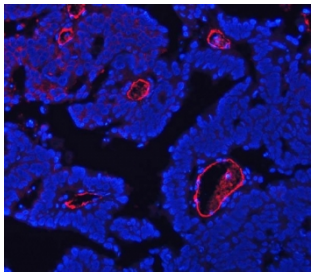
CD105 Antibody / Endoglin Endothelial Marker Antibody (RQ7690)

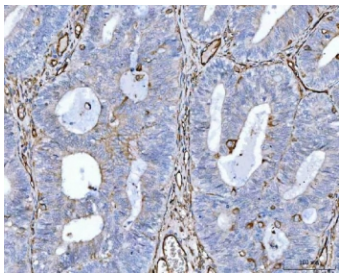
Catalog No.	Formulation	Size
RQ7690	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

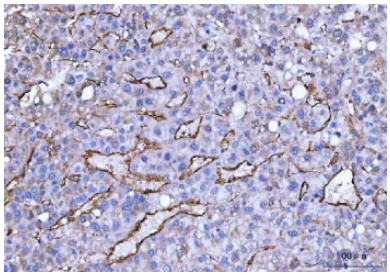
Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P17813
Localization	Cell surface
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This CD105 Antibody / Endoglin Endothelial Marker Antibody is available for research use only.



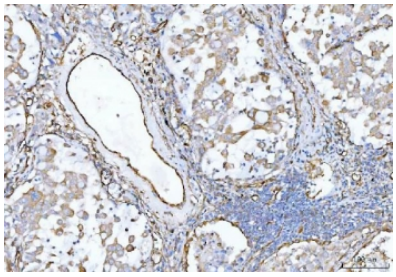
CD105 Antibody Ovarian Cancer Tissue IF. Immunofluorescence analysis of FFPE human ovarian cancer tissue using CD105 Antibody (red) demonstrates strong membranous staining of endothelial cells lining tumor-associated vasculature, consistent with Endoglin / CD105 expression as an endothelial marker of angiogenic blood vessels, while nuclei are counterstained with DAPI (blue). HIER: steam tissue sections in EDTA buffer, pH 8.0, for 20 min prior to immunostaining.



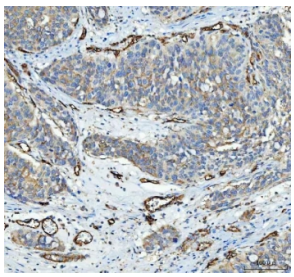
CD105 Antibody Endometrial Adenocarcinoma IHC. Immunohistochemistry analysis of FFPE human endometrial adenocarcinoma tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining of endothelial cells outlining tumor-associated vasculature within the stromal compartments, consistent with Endoglin / CD105 expression as an endothelial marker of angiogenic blood vessels, while tumor epithelial cells show minimal staining; nuclei are counterstained blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



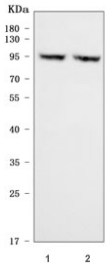
CD105 Antibody Liver Cancer IHC. Immunohistochemistry analysis of FFPE human liver cancer tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining of endothelial cells outlining irregular tumor-associated vasculature within the hepatic tumor parenchyma, consistent with Endoglin / CD105 expression as an endothelial marker of angiogenic blood vessels, while surrounding tumor cells show minimal staining; nuclei are counterstained blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



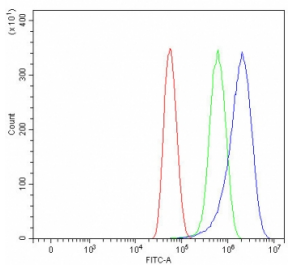
CD105 Antibody Lung Cancer IHC. Immunohistochemistry analysis of FFPE human lung cancer tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining of endothelial cells lining tumor-associated vasculature within stromal regions, consistent with Endoglin / CD105 expression as an endothelial marker of angiogenic blood vessels, while tumor epithelial cells show minimal staining; nuclei are counterstained blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



CD105 Antibody Bladder Urothelial Carcinoma IHC. Immunohistochemistry analysis of FFPE human bladder urothelial carcinoma tissue using CD105 Antibody demonstrates HRP-DAB brown membranous staining of endothelial cells outlining tumor-associated vasculature within stromal compartments, consistent with Endoglin / CD105 expression as an endothelial marker of angiogenic blood vessels, while surrounding tumor cells show minimal signal; nuclei are counterstained blue. HIER: boil tissue sections in pH 8 EDTA for 20 min and allow to cool before testing.



CD105 Antibody SiHa HeLa WB. Western blot analysis of human SiHa and HeLa cell lysates using CD105 Antibody detects bands at approximately 70-90 kDa, consistent with the predicted molecular weight of Endoglin / CD105 monomer in unmodified and glycosylated forms, along with higher molecular weight bands at approximately 140-180 kDa corresponding to dimeric species of this membrane glycoprotein.



CD105 Antibody U-87 MG FACS. Flow cytometry analysis of human U-87 MG cells using CD105 Antibody shows a clear rightward shift in fluorescence intensity compared to cells alone and isotype control, indicating CD105 / Endoglin expression on the cell surface, consistent with its role as an endothelial-associated marker and angiogenesis-related protein.

Description

Endoglin (ENG), also known as CD105, is a transmembrane glycoprotein predominantly expressed on vascular endothelial cells, where it functions as an important regulator of angiogenesis and vascular remodeling. CD105 Antibody / Endoglin Endothelial Marker Antibody targets this protein, which is primarily localized to the cell membrane with additional cytoplasmic distribution reflecting receptor synthesis and trafficking. CD105 antibody, also referred to as Endoglin antibody and ENG antibody in the literature, detects a key endothelial marker widely used in studies of vascular biology and tumor-associated angiogenesis.

Functionally, Endoglin plays a central role in transforming growth factor beta (TGF-beta) signaling pathways, modulating endothelial cell proliferation, migration, and survival. It acts as a co-receptor for TGF-beta ligands and contributes to the regulation of vascular development and repair. CD105 expression is strongly associated with active angiogenesis, particularly in tumor tissues, where proliferating endothelial cells exhibit elevated levels of Endoglin compared to normal vasculature. This makes CD105 a widely used marker for identifying neovascularization and assessing tumor vascular density.

CD105 is highly expressed in endothelial cells lining blood vessels across a wide range of tissues, including kidney, liver, and spleen, and is particularly enriched in newly formed or remodeling vessels. In tumor tissues, CD105-positive endothelial cells are commonly observed within the tumor microenvironment, reflecting ongoing angiogenic activity. Expression may also be detected in certain stromal and progenitor cell populations involved in vascular development. The ENG gene is located on chromosome 9q34.11 and is associated with hereditary hemorrhagic telangiectasia when mutated, highlighting its critical role in vascular integrity.

Structurally, Endoglin is a homodimeric membrane protein consisting of a large extracellular domain, a single transmembrane region, and a short cytoplasmic tail that participates in intracellular signaling. It interacts with components of the TGF-beta receptor complex and modulates downstream signaling cascades that influence endothelial cell behavior. Endoglin may also co-localize with other vascular markers and signaling molecules involved in angiogenesis and vascular homeostasis.

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

This antibody provides reliable detection of CD105 / Endoglin across multiple experimental approaches, supporting its use as an endothelial marker in immunohistochemistry, immunofluorescence, western blot, and flow cytometry applications. A CD105 antibody is suitable for detecting this angiogenesis-associated protein in studies of vascular biology, tumor progression, and endothelial cell function.

This CD105 antibody is part of a broader CD antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the CD105 Antibody / Endoglin Endothelial Marker Antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids E26-H267) 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 endothelial antibody, Endoglin angiogenesis antibody, ENG vascular marker

antibody

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