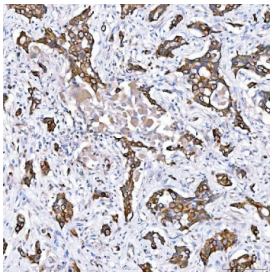
Cytokeratin 4 Rabbit Polyclonal Antibody / KRT4 Polyclonal Antibody (RQ8716)

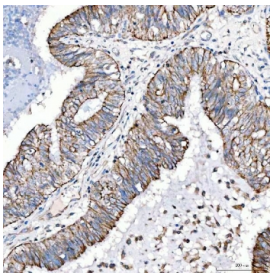
Catalog No.	Formulation	Size
RQ8716	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

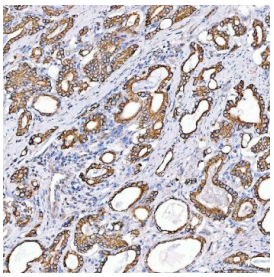
Availability	1-3 days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity chromatography
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	P19013
Localization	Cell membrane, cytoplasm, nucleus
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Immunofluorescence: 5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This Cytokeratin 4 Rabbit Polyclonal Antibody / KRT4 Polyclonal Antibody is available for research use only.



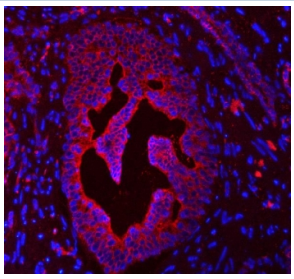
Cytokeratin 4 Rabbit Polyclonal Antibody by IHC in Human Lung Adenocarcinoma. Immunohistochemistry of FFPE human lung adenocarcinoma tissue using Cytokeratin 4 Rabbit Polyclonal Antibody. Moderate to strong brown DAB staining is observed in clusters of malignant epithelial cells, with predominantly cytoplasmic staining and variable intensity throughout the tumor. The surrounding stromal tissue exhibits considerably weaker staining, while nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer, pH 8, for 20 minutes, followed by cooling before antibody incubation.



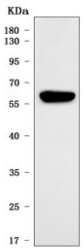
Cytokeratin 4 Rabbit Polyclonal Antibody by IHC in Human Endometrioid Adenocarcinoma. Immunohistochemistry of FFPE human endometrioid adenocarcinoma tissue using Cytokeratin 4 Rabbit Polyclonal Antibody. Moderate to strong brown DAB staining is observed predominantly in the cytoplasm of tumor cells forming irregular glandular structures, with particularly prominent staining along portions of the glandular epithelial lining. The surrounding stromal tissue shows comparatively little staining, and nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer, pH 8, for 20 minutes, followed by cooling before antibody incubation.



Cytokeratin 4 Rabbit Polyclonal Antibody by IHC in Human Prostate Adenocarcinoma. Immunohistochemistry of FFPE human prostate adenocarcinoma tissue using Cytokeratin 4 Rabbit Polyclonal Antibody. Strong brown DAB staining is observed in the cytoplasm of tumor cells lining numerous glandular structures, with variable staining intensity between glands. The surrounding stromal tissue exhibits relatively weak staining, providing contrast with the positively stained epithelial compartments. Nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer, pH 8, for 20 minutes, followed by cooling before antibody incubation.



Cytokeratin 4 Rabbit Polyclonal Antibody by IF in Human Prostate Cancer. Immunofluorescence staining of FFPE human prostate cancer tissue using Cytokeratin 4 Rabbit Polyclonal Antibody. Red fluorescence is observed predominantly in the cytoplasm of epithelial cells surrounding glandular lumens, highlighting the organization of tumor-associated epithelial structures. The surrounding tissue shows comparatively weaker fluorescence. Nuclei are counterstained blue with DAPI, allowing visualization of cellular distribution within the tissue. Heat-induced epitope retrieval was performed by steaming tissue sections in EDTA buffer, pH 8, for 20 minutes.



Cytokeratin 4 Rabbit Polyclonal Antibody by WB in Human HaCaT Cells. Western blot analysis of human HaCaT keratinocyte cell lysate using Cytokeratin 4 Rabbit Polyclonal Antibody. A prominent immunoreactive band is observed at approximately 56-60 kDa, consistent with the predicted molecular weight of KRT4 (~56 kDa). The relatively discrete band supports detection of a protein migrating at the expected molecular weight of cytokeratin 4 in human HaCaT cells. This result provides supporting evidence for antibody reactivity in western blot applications, complementing the immunohistochemistry and immunofluorescence data.

Description

Cytokeratin 4 Rabbit Polyclonal Antibody recognizes keratin 4 (KRT4), a type II intermediate filament protein expressed primarily in non-keratinized stratified squamous epithelia. Also known as CK4 or cytokeratin 4, this approximately 59 kDa protein is encoded by the KRT4 gene on chromosome 12. KRT4 is particularly abundant in the suprabasal epithelial layers of the esophagus, oral mucosa, pharynx, and other mucosal surfaces. Its intermediate filament network provides mechanical stability and helps epithelial cells withstand the physical stresses associated with normal tissue function.

KRT4 forms heterodimers with keratin 13 (KRT13), a type I intermediate filament protein expressed in similar epithelial compartments. These complexes assemble into larger filament networks that maintain cellular architecture and epithelial integrity. During epithelial differentiation, KRT4 and KRT13 expression increases as cells transition from the proliferative basal compartment into the differentiated suprabasal layers. This expression pattern distinguishes many non-keratinized mucosal epithelia from keratinized epidermis, where KRT1 and KRT10 are more prominent. KRT4 is consequently investigated as a marker of epithelial identity and differentiation.

Mutations in KRT4 are associated with white sponge nevus, an inherited disorder characterized by thickened, white, folded plaques affecting the oral mucosa and occasionally other mucosal tissues. These mutations can disrupt intermediate filament assembly and alter epithelial organization. Changes in KRT4 expression have also been investigated in squamous cell carcinomas, particularly those arising in the head, neck, and esophagus. Reduced expression may accompany abnormal differentiation in certain tumors, although expression patterns vary according to tissue origin and disease progression.

Beyond epithelial differentiation, KRT4 is studied in mucosal remodeling, inflammatory conditions, and epithelial tumor biology. NSJ Bioreagents offers a rabbit polyclonal antibody generated against an E. coli-derived recombinant human KRT4 fragment spanning amino acids 170-427. The antibody is suitable for investigating KRT4 expression in human samples using multiple experimental approaches. A Cytokeratin 4 Rabbit Polyclonal Antibody provides a useful tool for studying mucosal epithelial differentiation, intermediate filament organization, and changes in keratin expression associated with disease.

Explore our protein microarray-validated Cytokeratin 4 Antibody KRT4/2804 for investigating KRT4 expression, epithelial differentiation, and keratin filament organization.

Application Notes

Optimal dilution of the Cytokeratin 4 Rabbit Polyclonal Antibody / KRT4 Polyclonal Antibody should be determined by the researcher.

Immunogen

An E.coli-derived human recombinant protein (amino acids N170-S427) was used as the immunogen for the Cytokeratin 4 Rabbit Polyclonal Antibody.

Storage

After reconstitution, the Cytokeratin 4 Rabbit Polyclonal 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

CK4 antibody, Keratin 4 antibody, KRT4 antibody, Cytokeratin-4 antibody, Keratin Type II Cytoskeletal 4 antibody, Esophageal Cytokeratin antibody

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