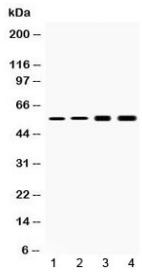
# Cytokeratin 18 Polyclonal Antibody (R32666)

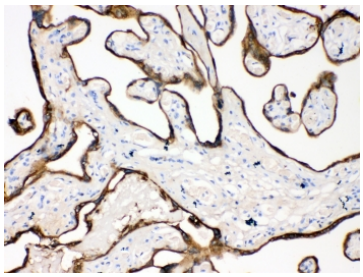
| Catalog No. | Formulation | Size |
|---|---|---|
| R32666 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

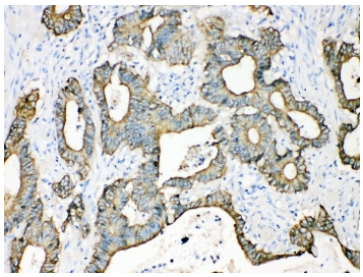
| | |
|---|---|
| **Species Reactivity** | Human, Mouse, Rat |
| **Format** | Antigen affinity purified |
| **Host** | Rabbit |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity |
| **Buffer** | Lyophilized from 1X PBS with 2.5% BSA, 0.025% sodium azide |
| **UniProt** | P05783 |
| **Localization** | Cytoplasmic |
| **Applications** | Western blot: 0.5-1ug/ml<br>Immunohistochemistry (FFPE): 1-2ug/ml<br>Immunofluorescence (FFPE): 1-2ug/ml<br>Flow cytometry: 1-3ug/10^6 cells |
| **Limitations** | This Cytokeratin 18 Polyclonal Antibody is available for research use only. |



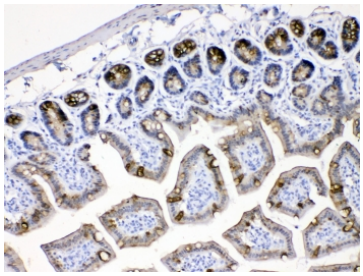

Cytokeratin 18 Polyclonal Antibody by WB in human and rodent lysates. Western blot analysis of rat liver (lane 1), mouse liver (lane 2), human HeLa cells (lane 3), and human HepG2 cells (lane 4) using Cytokeratin 18 Polyclonal Antibody at 0.5 ug/ml. A prominent immunoreactive band is detected in each sample, migrating at approximately 48 kDa, consistent with the predicted molecular weight of KRT18. The bands exhibit similar electrophoretic mobility, with slightly stronger signals in the human cell lysates. No prominent additional bands are visible in the displayed molecular weight range. These results demonstrate recognition of a protein near the expected size of KRT18 across human, mouse, and rat samples.



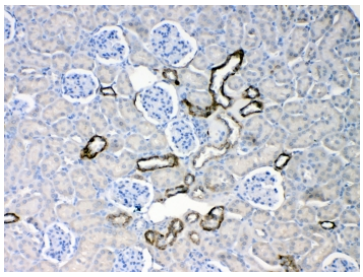
Cytokeratin 18 Polyclonal Antibody by IHC in human placenta. Immunohistochemistry of formalin-fixed, paraffin-embedded human placental tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Strong brown immunoreactivity outlines numerous chorionic villi, with staining concentrated in the trophoblastic epithelial layer surrounding the villous structures. The underlying villous stroma exhibits comparatively limited staining. Hematoxylin counterstaining reveals nuclei in blue. The distribution is consistent with KRT18 expression in placental trophoblasts, which contain keratin intermediate filament networks characteristic of epithelial differentiation. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



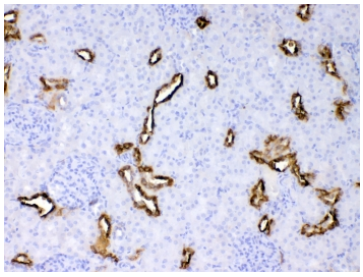
Cytokeratin 18 Polyclonal Antibody by IHC in human intestinal carcinoma. Immunohistochemistry of formalin-fixed, paraffin-embedded human intestinal carcinoma tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Brown cytoplasmic immunoreactivity highlights irregular glandular epithelial structures distributed throughout the tumor specimen. Staining intensity varies among carcinoma cells, with stronger labeling in portions of the glandular epithelium and comparatively limited staining in intervening stromal regions. Hematoxylin counterstaining reveals nuclei in blue. The observed distribution demonstrates KRT18 expression within the neoplastic epithelial compartment. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



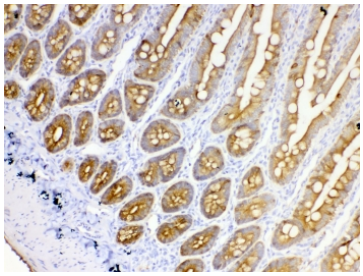
Cytokeratin 18 Polyclonal Antibody by IHC in mouse intestine. Immunohistochemistry of formalin-fixed, paraffin-embedded mouse intestinal tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Brown cytoplasmic immunoreactivity is visible throughout numerous intestinal epithelial cells lining villous and crypt structures. The staining highlights the epithelial compartment and its organized glandular architecture, while surrounding connective tissue exhibits comparatively limited immunoreactivity. Hematoxylin counterstaining reveals nuclei in blue. The distribution is consistent with KRT18 expression in simple intestinal epithelium and demonstrates its presence in normal mouse gastrointestinal tissue. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



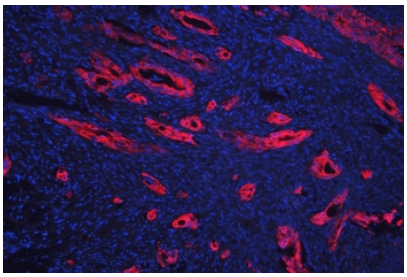
Cytokeratin 18 Polyclonal Antibody by IHC in mouse kidney. Immunohistochemistry of formalin-fixed, paraffin-embedded mouse kidney tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Brown immunoreactivity is concentrated in selected renal tubular epithelial structures, particularly along portions of the tubular lining. Other tubular profiles exhibit weaker staining, while glomerular regions show comparatively limited immunoreactivity. Hematoxylin counterstaining reveals nuclei in blue. The heterogeneous distribution illustrates KRT18 expression within specific renal epithelial populations rather than uniform staining throughout the kidney. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



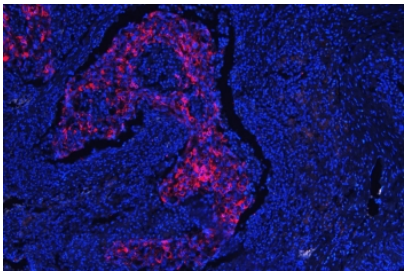
Cytokeratin 18 Polyclonal Antibody by IHC in rat kidney. Immunohistochemistry of formalin-fixed, paraffin-embedded rat kidney tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Brown cytoplasmic immunoreactivity highlights scattered renal tubular epithelial profiles distributed throughout the tissue. Several tubules exhibit strong staining along their epithelial lining, while neighboring tubular structures show weaker or minimal immunoreactivity. Hematoxylin counterstaining reveals nuclei in blue, providing contrast with the positively stained tubular compartments. The staining demonstrates a heterogeneous distribution of KRT18 among renal epithelial structures in rat kidney. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



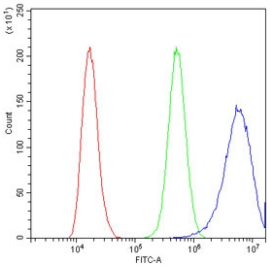
Cytokeratin 18 Polyclonal Antibody by IHC in rat intestine. Immunohistochemistry of formalin-fixed, paraffin-embedded rat intestinal tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml. Strong brown cytoplasmic immunoreactivity highlights intestinal epithelial cells lining the villi and crypts. The staining follows the organized epithelial structures, with prominent labeling throughout the mucosal compartment and comparatively limited staining in the underlying connective tissue. Hematoxylin counterstaining reveals nuclei in blue. The distribution is consistent with KRT18 expression in simple intestinal epithelium and demonstrates its presence in normal rat gastrointestinal tissue. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes, followed by cooling before antibody incubation.



Cytokeratin 18 Polyclonal Antibody by IF in human intestinal carcinoma. Immunofluorescence staining of formalin-fixed, paraffin-embedded human intestinal carcinoma tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml, detected in red, with DAPI nuclear counterstaining in blue. Strong red fluorescence highlights irregularly arranged glandular epithelial structures distributed throughout the specimen. The signal is concentrated in the cytoplasmic regions of carcinoma cells, while intervening stromal areas exhibit comparatively limited fluorescence. Blue nuclear staining provides contrast with the KRT18-positive epithelial structures. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes before antibody incubation.



Cytokeratin 18 Polyclonal Antibody by IF in human lung carcinoma. Immunofluorescence staining of formalin-fixed, paraffin-embedded human lung carcinoma tissue using Cytokeratin 18 Polyclonal Antibody at 1 ug/ml, detected in red, with DAPI nuclear counterstaining in blue. Red fluorescence highlights irregular epithelial cell aggregates within the tumor specimen, with staining concentrated in the cytoplasmic regions surrounding blue-stained nuclei. The positively stained areas form distinct clusters against a background of predominantly blue nuclear fluorescence. The distribution demonstrates KRT18-associated staining within the neoplastic epithelial population. Heat-induced epitope retrieval was performed by steaming sections in citrate buffer at pH 6 for 20 minutes before antibody incubation.




Cytokeratin 18 Polyclonal Antibody by FACS in human A431 cells. Flow cytometric analysis of human A431 epidermoid carcinoma cells using Cytokeratin 18 Polyclonal Antibody at 1 ug per 10^6 cells, with goat serum blocking. The red histogram represents unstained cells, the green histogram represents the isotype control, and the blue histogram represents antibody-stained cells. The blue population exhibits a pronounced rightward fluorescence shift relative to both controls, indicating substantially increased antibody-associated fluorescence. The three distributions are clearly separated, with minimal overlap between their principal peaks. These results demonstrate detection of KRT18-associated fluorescence in human A431 cells under the tested conditions.

## Description

Cytokeratin 18 Polyclonal Antibody recognizes keratin 18, a type I intermediate filament protein encoded by the KRT18 gene on human chromosome 12q13.13. Keratin 18 is an essential component of the cytoskeleton in simple epithelial cells, where it forms heteropolymeric intermediate filaments with the type II keratin KRT8. These networks provide structural support, help maintain cellular architecture, and contribute to epithelial resilience under mechanical and physiological stress. Their organization is especially important in tissues exposed to repeated deformation, metabolic demands, and environmental challenges.

Keratin 18 is widely expressed in simple and glandular epithelia, including hepatocytes, renal tubular epithelial cells, intestinal epithelium, and epithelial populations of the respiratory and reproductive systems. Its distribution differs from that of keratins associated with mature stratified squamous epithelia. These tissue-specific expression patterns reflect differences in cellular differentiation and cytoskeletal requirements. Cytokeratin 18 Polyclonal Antibody is relevant to comparative studies examining epithelial organization across organs and experimental species.

In the liver, keratins 8 and 18 form the principal intermediate filament network of hepatocytes. Variants in KRT18 have been associated with susceptibility to certain liver disorders, including cryptogenic cirrhosis. Experimental studies have demonstrated that disruption of keratin organization can influence hepatocyte integrity and responses to cellular stress. KRT18 is also expressed in renal tubular epithelia, where intermediate filaments contribute to the structural organization of epithelial cells involved in transport and filtration-related processes.

In oncology, keratin 18 is frequently retained in carcinomas originating from simple or glandular epithelia. Its expression is relevant to studies of colorectal, pulmonary, pancreatic, breast, and other epithelial malignancies. Immunohistochemical analysis can help distinguish epithelial tumor populations from surrounding stromal components, although KRT18 expression alone does not establish tumor origin or classification.

Keratin 18 additionally undergoes phosphorylation and caspase-mediated cleavage during cellular stress and apoptosis. These modifications influence filament dynamics and have attracted interest in research involving epithelial injury and cancer treatment responses. However, antibodies recognizing total KRT18 should not be assumed to identify specific cleavage products without additional validation.

NSJ Bioreagents provides this antibody for investigating epithelial intermediate filament expression across human, mouse, and rat research models. Its recognition of KRT18 supports comparative studies of epithelial differentiation, tissue architecture, and cytoskeletal responses to injury.

Explore our Cytokeratin 18 Antibody KRT18/835 for additional research into KRT18 expression, epithelial differentiation, and cytoskeletal organization in normal tissues and carcinomas.

## Application Notes

Optimal dilution of the Cytokeratin 18 Polyclonal Antibody should be determined by the researcher.

## Immunogen

Amino acids E204-H430 from the human protein were used as the immunogen for the Cytokeratin 18 antibody.

## Storage

After reconstitution, the Cytokeratin 18 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

Keratin 18 antibody, CK18 antibody, KRT18 antibody, K18 antibody, Cytokeratin-18 antibody, Keratin-18 antibody, Type I Cytoskeletal Keratin 18 antibody

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