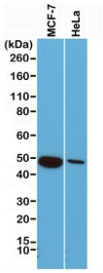
Recombinant Cytokeratin 18 Antibody [clone RM279] (R20296)

Catalog No.	Formulation	Size
R20296-0.1ML	Antibody in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ul

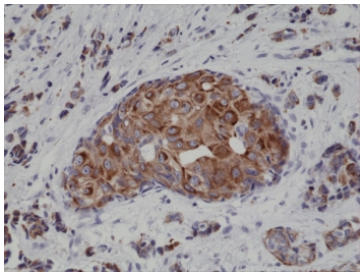
Recombinant RABBIT MONOCLONAL

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM279
Purity	Protein A purified from animal origin-free supernatant
UniProt	P05783
Gene ID	3875
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1:1000-1:4000 (1) Western Blot : 1:1000-1:2000
Limitations	This recombinant Cytokeratin 18 antibody is available for research use only.



Western blot of human MCF7 and HeLa cell lysate using recombinant Cytokeratin 18 antibody at 1:1000. Predicted molecular weight ~48 kDa.



IHC testing of FFPE human breast cancer tissue with recombinant Cytokeratin 18 antibody at 1:4000.

Description

The Recombinant Cytokeratin 18 antibody is a recombinant reagent engineered to detect cytokeratin 18 (CK18), a type I intermediate filament protein expressed primarily in simple epithelial tissues. Cytokeratin 18 is encoded by the KRT18 gene and pairs with the type II keratin, cytokeratin 8, to form stable heteropolymers that maintain cytoskeletal organization and structural integrity in epithelial cells. Because of its restricted distribution, CK18 is widely used as a marker of simple epithelia and epithelial-derived tumors. The Recombinant Cytokeratin 18 antibody provides consistent and reproducible detection of this filament protein across research and diagnostic applications.

Cytokeratin 18 is approximately 45 kDa and is highly conserved among mammals. It plays both structural and regulatory roles, contributing to epithelial cell resilience against mechanical stress and participating in intracellular signaling. During apoptosis, CK18 undergoes caspase-mediated cleavage, producing neo-epitopes that serve as biomarkers of epithelial cell death. Detection of CK18 and its cleavage products is therefore important for studying tissue injury, apoptosis, and cancer biology. The Recombinant Cytokeratin 18 antibody recognizes epitopes within the intact protein, making it suitable for evaluating baseline expression and cytoskeletal organization.

In immunohistochemistry, the Recombinant Cytokeratin 18 antibody highlights cytoplasmic filament networks in simple epithelia, including liver, pancreas, intestine, and glandular tissues. In immunofluorescence, it reveals filamentous structures that outline the epithelial cytoskeleton and can be used to track cytoskeletal remodeling under stress conditions. In western blotting, the antibody detects CK18 as a characteristic band, enabling quantification in tissue lysates and cultured cell extracts. Recombinant production ensures lot-to-lot consistency, eliminating variability often associated with hybridoma-derived antibodies.

The Recombinant Cytokeratin 18 antibody is particularly valuable in oncology, as CK18 is expressed in carcinomas but not in non-epithelial tumors such as sarcomas, making it a useful diagnostic marker. Measurement of caspase-cleaved CK18 fragments in patient samples has been applied as a noninvasive biomarker of apoptosis in cancer and liver disease. In addition, CK18 is used to evaluate epithelial differentiation in stem cell and developmental biology studies. Synonym phrases such as recombinant KRT18 antibody, recombinant keratin 18 antibody, and recombinant type I cytokeratin antibody broaden accessibility for researchers employing alternate nomenclature.

By providing validated and reproducible detection, the Recombinant Cytokeratin 18 antibody supports studies in cell biology, pathology, and translational research. NSJ Bioreagents ensures strict quality control for this reagent, giving researchers confidence in its use across western blotting, immunofluorescence, and immunohistochemistry. With specificity for CK18, the Recombinant Cytokeratin 18 antibody is an indispensable tool for advancing research in epithelial biology, apoptosis, and cancer diagnostics.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Cytokeratin 18 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

1. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.

Immunogen

A peptide corresponding to the N-terminus of human Cytokeratin 18 was used as the immunogen for this recombinant Cytokeratin 18 antibody.

Storage

Store the recombinant Cytokeratin 18 antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).