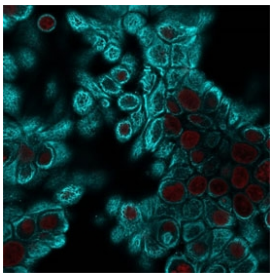
Pan Cytokeratin Antibody for IF / Cytokeratin Immunofluorescence Antibody [clone Cocktail PAN-CK] (V3070)

Catalog No.	Formulation	Size
V3070-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3070-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3070SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3070IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

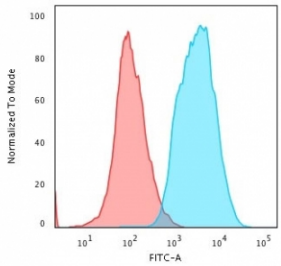
Citations (1)

Bulk quote request

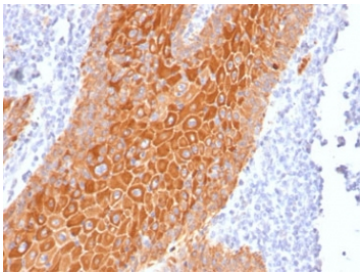
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	Cocktail PAN-CK
Purity	Protein G affinity chromatography
UniProt	Q7Z794, Q01546
Localization	Cytoplasmic
Applications	Flow Cytometry : 0.5-1ug/million cells Immunohistochemistry (FFPE) : 0.5-1ug/ml for 30 min at RT Immunofluorescence : 1-2ug/ml
Limitations	This Pan Cytokeratin Antibody for IF / Cytokeratin Immunofluorescence Antibody is available for research use only.



Pan Cytokeratin Antibody HeLa cells IF. Immunofluorescence analysis of cytokeratin expression in human HeLa cells using Pan Cytokeratin antibody clone PAN-CK. The cytokeratin signal (cyan) highlights a filamentous cytoplasmic network outlining epithelial cell morphology and cell boundaries, consistent with intermediate filament organization. Nuclei are counterstained with NucSpot (red). The staining pattern demonstrates clear epithelial cell identification and cytoskeletal structure visualization in cultured cells.



Pan Cytokeratin Antibody HeLa cells FACS. Flow cytometry analysis of cytokeratin expression in permeabilized human HeLa cells using Pan Cytokeratin antibody clone PAN-CK. The antibody-stained population (blue) shows a clear right-shift compared to isotype control (red), indicating robust intracellular detection of cytokeratin proteins. The distinct separation supports reliable identification of epithelial cells and confirms strong cytokeratin expression in this epithelial cell line.



Pan Cytokeratin Antibody human squamous cell carcinoma IHC. Immunohistochemistry analysis of cytokeratin expression in FFPE human squamous cell carcinoma using Pan Cytokeratin antibody clone PAN-CK. Strong cytoplasmic HRP-DAB brown staining highlights malignant epithelial cells, clearly delineating tumor nests and cellular architecture within the surrounding stromal background. The staining pattern confirms epithelial origin and supports identification of carcinoma cells in tissue sections. HIER was performed by boiling tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 minutes followed by cooling prior to antibody incubation.

Description

Cytokeratins are a major class of intermediate filament proteins that form an extensive cytoskeletal network within epithelial cells, where they provide mechanical stability, maintain cell shape, and support tissue integrity. These proteins are divided into type I acidic keratins and type II basic keratins, which heterodimerize to assemble filamentous structures that span the cytoplasm. Because epithelial cells express distinct combinations of cytokeratin isoforms depending on tissue type and differentiation state, visualization of cytokeratin filaments provides a direct and highly informative readout of epithelial identity and cellular organization.

Pan Cytokeratin Antibody for IF / Cytokeratin Immunofluorescence Antibody (clone PAN-CK) is designed for broad detection of epithelial cytokeratin proteins in fluorescence-based applications, enabling high-resolution visualization of the epithelial cytoskeletal network. This mouse monoclonal antibody cocktail recognizes a wide range of type I and type II cytokeratins, including CK1, CK3, CK4, CK5, CK6, CK7, CK8, CK10, CK13, CK14, CK15, CK16, CK17, CK18, and CK19, providing comprehensive epithelial labeling across diverse cell types. Pan cytokeratin antibody, also referred to as cytokeratin cocktail antibody or CK pan antibody, is particularly valuable in immunofluorescence applications where detailed visualization of epithelial structure is required.

In immunofluorescence staining, cytokeratin proteins produce a characteristic filamentous cytoplasmic pattern that reflects the organization of intermediate filaments within epithelial cells. This network extends throughout the cytoplasm and outlines cell boundaries, allowing clear visualization of cell shape, polarity, and structural organization. The PAN-CK clone enables consistent labeling of these filament systems, making it well suited for imaging epithelial cells in cultured systems and fluorescence-based tissue analysis.

Fluorescence-based detection of cytokeratins is especially powerful for co-localization and multiplex imaging studies, where epithelial cells must be distinguished from surrounding stromal, endothelial, or immune cell populations. By combining cytokeratin staining with additional fluorescent markers, researchers can define epithelial compartments within

complex biological systems and analyze cellular interactions with high spatial resolution. This capability is particularly important in studies examining tissue organization, tumor microenvironments, and epithelial cell behavior.

The broad reactivity of the PAN-CK antibody cocktail ensures robust detection across multiple epithelial cell types, providing a comprehensive view of epithelial distribution without restriction to a single keratin isoform. This distinguishes pan cytokeratin antibodies from isoform-specific keratin reagents, which are designed to identify particular epithelial subtypes. In contrast, pan cytokeratin immunofluorescence staining is optimized for inclusive epithelial visualization, making it an effective first-line approach for identifying epithelial cells in heterogeneous samples.

In cultured epithelial cells, cytokeratin staining reveals an organized filament network that supports cell morphology and structural stability, often appearing as interconnected filament bundles extending throughout the cytoplasm. In fluorescence imaging studies, this pattern provides enhanced spatial resolution compared to chromogenic methods and enables detailed analysis of subcellular organization. The compatibility of immunofluorescence with confocal microscopy further supports high-resolution imaging of epithelial cytoskeletal architecture.

The mouse monoclonal cocktail format of clone PAN-CK provides consistent recognition of multiple cytokeratin proteins, ensuring reproducible staining across experimental conditions. This combination of broad epithelial coverage and distinct filamentous staining pattern supports reliable identification and visualization of epithelial cells in immunofluorescence applications.

Pan Cytokeratin Antibody for immunofluorescence therefore provides a powerful tool for high-resolution visualization of epithelial cell structure, enabling detailed analysis of cytoskeletal organization, cell morphology, and epithelial distribution in fluorescence-based imaging studies.

This antibody is part of our Pan Cytokeratin Antibody collection, which enables broad epithelial detection across normal and cancer tissues.

Application Notes

Optimal dilution of the Pan Cytokeratin Antibody for IF / Cytokeratin Immunofluorescence Antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 min.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Human epidermal keratin was used as the immunogen for the pan Cytokeratin antibody cocktail.

Storage

Store the pan Cytokeratin antibody cocktail at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Pan cytokeratin IF antibody, cytokeratin cocktail IF antibody, epithelial marker immunofluorescence antibody, CK pan fluorescence antibody, cytokeratin staining antibody