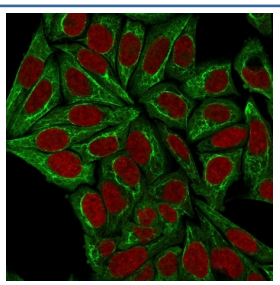
Pan Cytokeratin Antibody for FACS / Epithelial Cell Identification Antibody [clone PCK/3150] (V8321)

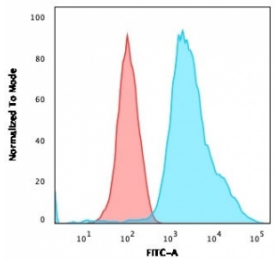
Catalog No.	Formulation	Size
V8321-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V8321-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V8321SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

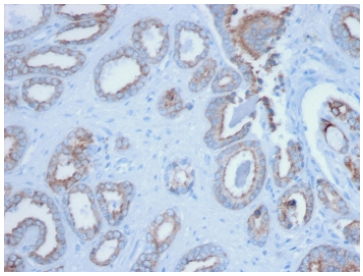
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	PCK/3150
Purity	Protein G affinity chromatography
Localization	Cytoplasmic
Applications	Flow Cytometry : 1-2ug/million cells in 0.1ml Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This Pan Cytokeratin Antibody for FACS / Epithelial Cell Identification Antibody is available for research use only.



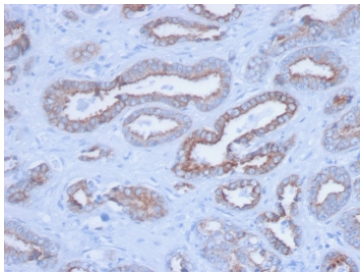
Immunofluorescent staining of permeabilized human HeLa cells with Pan Cytokeratin antibody (clone PCK/3150, green) and Reddot nuclear stain (red).



Pan Cytokeratin Antibody HeLa cells FACS. Flow cytometry analysis of cytokeratin expression in permeabilized human HeLa cells using Pan Cytokeratin antibody clone PCK/3150. The antibody-stained population (blue) shows a clear right-shift compared to isotype control (red), indicating strong intracellular detection of cytokeratin proteins. The distinct separation supports accurate gating and reliable identification of epithelial cells in this epithelial cell line.



IHC staining of FFPE human prostate with Pan Cytokeratin antibody (clone PCK/3150). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



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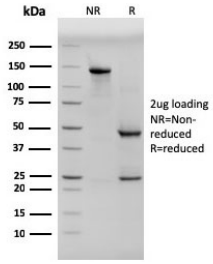

SDS-PAGE analysis of purified, BSA-free Pan Cytokeratin antibody (clone PCK/3150) as confirmation of integrity and purity.

Description

Cytokeratins are a major class of intermediate filament proteins that form a structural network within epithelial cells, where they maintain cellular integrity, support mechanical stability, and preserve cell shape. These proteins are divided into type I acidic and type II basic keratins, which heterodimerize to assemble filamentous cytoskeletal structures throughout the cytoplasm. Because cytokeratin expression is a defining feature of epithelial cells and is largely absent from mesenchymal, hematopoietic, and most stromal cell types, cytokeratins serve as reliable intracellular markers for identifying epithelial lineage within heterogeneous cell populations.

Pan Cytokeratin Antibody for FACS / Epithelial Cell Identification Antibody (clone PCK/3150) is optimized for intracellular detection of cytokeratin proteins in flow cytometry applications, enabling accurate identification and quantification of epithelial cells. This mouse monoclonal antibody recognizes multiple cytokeratin isoforms, allowing broad epithelial detection without restriction to a single keratin subtype. Pan cytokeratin antibody, also referred to as cytokeratin cocktail antibody or CK pan antibody, is widely used in flow cytometry workflows where epithelial cells must be distinguished from surrounding non-epithelial populations.

Because cytokeratins are intracellular cytoskeletal proteins, effective detection by flow cytometry requires fixation and permeabilization of cells to allow antibody access to the cytoplasmic filament network. Following permeabilization,

cytokeratin staining produces a strong and uniform intracellular signal that can be readily detected across epithelial cells. This results in a clearly defined positive population that can be separated from cytokeratin-negative cells using standard gating strategies, supporting robust identification of epithelial cells in mixed samples.

In flow cytometry analysis, pan cytokeratin staining typically generates a distinct right-shifted population relative to isotype controls, reflecting high intracellular abundance of cytokeratin proteins in epithelial cells. The strength and consistency of this signal improve gating confidence and reduce ambiguity when analyzing complex samples. This makes clone PCK/3150 particularly well suited for quantitative applications where accurate discrimination between epithelial and non-epithelial populations is required.

Pan cytokeratin detection by FACS is especially valuable in studies involving dissociated tissues, primary cell isolates, and tumor-derived samples, where epithelial cells must be identified within a heterogeneous cellular background. In oncology research, cytokeratin staining is commonly used to detect epithelial-derived tumor cells, including circulating tumor cells and cells isolated from solid tumors. The ability to detect epithelial markers at the single-cell level enables precise analysis of tumor cell frequency, distribution, and phenotypic characteristics.

In addition to tumor cell identification, pan cytokeratin flow cytometry supports studies of epithelial cell enrichment, cell sorting, and population profiling. By combining cytokeratin staining with additional markers, researchers can further define epithelial subpopulations and analyze interactions between epithelial and non-epithelial cells. This multiparametric capability is a key advantage of flow cytometry and enhances the utility of broad epithelial markers such as pan cytokeratin antibodies.

The broad reactivity of clone PCK/3150 ensures inclusive detection across diverse epithelial cell types, making it an effective first-line marker for epithelial identification. Unlike keratin-specific antibodies that target individual isoforms associated with particular tissues or differentiation states, this antibody provides comprehensive coverage of epithelial cytokeratin expression. This makes it particularly useful in exploratory studies or in samples where epithelial subtype is not known in advance.

As a mouse monoclonal antibody, clone PCK/3150 provides consistent and reproducible recognition of cytokeratin proteins, supporting reliable signal detection across experiments. The monoclonal format ensures stable binding characteristics, which is critical for quantitative flow cytometry applications where reproducibility and signal consistency are essential.

Pan Cytokeratin Antibody for flow cytometry therefore provides a powerful and broadly applicable tool for identifying epithelial cells at the single-cell level, enabling precise gating, quantitative population analysis, and reliable detection of epithelial-derived cells in complex biological samples.

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 FACS / Epithelial Cell Identification Antibody should be determined by the researcher.

Immunogen

A crude cytokeratin extract prepared from RT-4 and MCF-7 cells was used as the immunogen for this Pan Cytokeratin antibody.

Storage

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

Alternate Names

Pan cytokeratin FACS antibody, cytokeratin flow cytometry antibody, epithelial marker FACS antibody, CK pan intracellular antibody, cytokeratin detection antibody