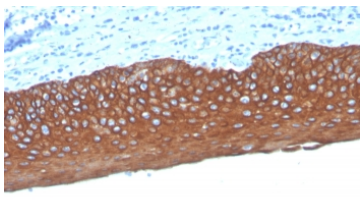
Pan Cytokeratin Antibody / Carcinoma Identification Marker [clone MonoPoly/4999R] (V4503)

Catalog No.	Formulation	Size
V4503-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4503-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4503SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

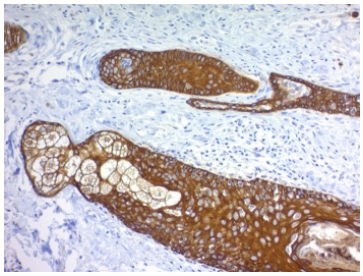
Recombinant RABBIT MONOCLONAL

Bulk quote request

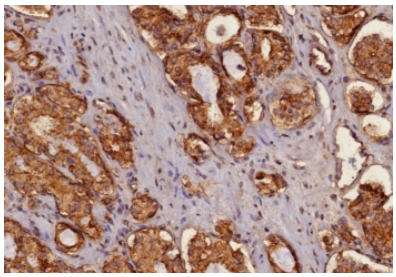
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MonoPoly/4999R
Purity	Protein A/G affinity
UniProt	Q7Z794, Q01546
Localization	Cytoplasm
Applications	Flow Cytometry : 0.5-1ug/million cells Immunofluorescence : 1-2ug/ml Western Blot : 0.5-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This Pan Cytokeratin Antibody / Carcinoma Identification Marker is available for research use only.



Pan Cytokeratin Antibody human tonsil IHC. Immunohistochemistry analysis of cytokeratin expression in FFPE human tonsil tissue using Pan Cytokeratin antibody clone MonoPoly/4999R. Strong cytoplasmic HRP-DAB brown staining highlights epithelial cells within the tonsillar surface epithelium, clearly delineating epithelial structures against lymphoid tissue. The staining pattern supports epithelial lineage identification and demonstrates reliable detection of epithelial cells within complex tissue environments. 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.



Pan Cytokeratin Antibody basal cell carcinoma IHC. Immunohistochemistry analysis of cytokeratin expression in FFPE human basal cell carcinoma using Pan Cytokeratin antibody clone MonoPoly/4999R. Strong cytoplasmic HRP-DAB brown staining highlights epithelial tumor nests and cords within the dermis, clearly distinguishing carcinoma cells from surrounding stromal tissue. The staining pattern supports identification of epithelial tumor origin and visualization of tumor architecture. 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.



Pan Cytokeratin Antibody prostate carcinoma IHC. Immunohistochemistry analysis of cytokeratin expression in FFPE human prostate carcinoma tissue using Pan Cytokeratin antibody clone MonoPoly/4999R. Strong cytoplasmic HRP-DAB brown staining highlights malignant epithelial cells forming irregular glandular structures, clearly separating carcinoma cells from surrounding stromal components. The staining pattern supports identification of epithelial tumor origin and visualization of tumor morphology. 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 a structural framework within epithelial cells, where they maintain cellular integrity, support mechanical stability, and preserve tissue organization. These proteins are divided into type I acidic and type II basic keratins, which assemble into filamentous cytoskeletal networks that are characteristic of epithelial lineage. Because cytokeratin expression is largely restricted to epithelial cells, detection of these proteins provides a reliable method for distinguishing epithelial-derived cells from mesenchymal, hematopoietic, and other non-epithelial populations.

Pan Cytokeratin Antibody / Carcinoma Identification Marker (clone MonoPoly/4999R) is designed for robust and consistent detection of cytokeratin proteins in immunohistochemistry, enabling confident identification of epithelial-derived tumor cells. This recombinant rabbit monoclonal antibody provides broad recognition of cytokeratin proteins, allowing reliable labeling of carcinoma cells across a wide range of tumor types. Pan cytokeratin antibody, also referred to as cytokeratin cocktail antibody or CK pan antibody, is widely used for identifying epithelial origin in tissue sections and for distinguishing carcinomas from non-epithelial malignancies.

In immunohistochemistry, cytokeratin staining appears as strong cytoplasmic labeling of epithelial cells, reflecting the intermediate filament network within the cytoplasm. In tumor samples, this staining pattern highlights carcinoma cell populations and clearly differentiates them from surrounding stromal, inflammatory, and mesenchymal components, which typically lack cytokeratin expression. The resulting contrast enables precise localization of epithelial tumor cells within complex tissue environments.

Pan cytokeratin staining is particularly useful for identifying carcinoma architecture, including glandular formations, solid tumor nests, and invasive fronts. These structural patterns provide important context for interpreting tumor organization and distribution. The ability to clearly delineate tumor boundaries supports accurate assessment of tumor extent and cellular composition.

The broad reactivity of clone MonoPoly/4999R ensures detection of cytokeratin proteins across diverse carcinoma types, regardless of variability in keratin expression profiles. This minimizes the risk of false-negative staining and supports consistent identification of epithelial tumor cells across tissues with differing differentiation states. The recombinant rabbit format provides high affinity and strong signal intensity, contributing to crisp and reproducible staining patterns.

In poorly differentiated tumors, where morphologic features may be less defined, cytokeratin detection remains a reliable

indicator of epithelial origin. The presence of cytokeratin staining in such cases provides critical information for distinguishing carcinomas from other malignancies and supports accurate classification of tumor type.

Because this antibody is designed for broad epithelial detection, it is not intended for subtype-specific characterization. Instead, it provides a foundational marker for epithelial lineage that can be used in combination with more specific markers to further refine tumor classification and differentiation status.

Pan Cytokeratin Antibody clone MonoPoly/4999R therefore provides a highly reliable tool for carcinoma identification, enabling clear visualization of epithelial tumor cells, accurate delineation of tumor architecture, and confident distinction of epithelial-derived malignancies in tissue sections.

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 / Carcinoma Identification Marker should be determined by the researcher.

This antibody cocktail recognizes acidic (Type I or LMW) and basic (Type II or HMW) cytokeratins, with 67kDa (CK1); 64kDa (CK3); 59kDa (CK4); 58kDa (CK5); 56kDa (CK6); 55kDa (CK7); 52kDa (CK8); 56.5kDa (CK10); 53kDa (CK13); 50kDa (CK14); 50kDa (CK15); 48kDa (CK16); 46kDa (CK17); 45kDa (CK18), 40kDa (CK19) and 46kDa (CK20).

Immunogen

Recombinant fragments and/or synthetic peptides of human Cytokeratin proteins were used as the immunogen for the Pan Cytokeratin antibody.

Storage

Aliquot the Pan Cytokeratin antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Pan cytokeratin antibody IHC, carcinoma marker antibody, epithelial tumor marker antibody, CK pan carcinoma detection antibody, cytokeratin cancer marker antibody