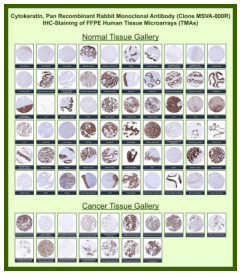
Pan Cytokeratin Antibody for IHC / Broad Epithelial Marker Antibody [clone MSVA-000R] (V6151)

Catalog No.	Formulation	Size
V6151-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6151-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant RABBIT MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG, kappa
Clone Name	MSVA-000R
UniProt	Q7Z794, Q01546
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This Pan Cytokeratin Antibody for IHC / Broad Spectrum Epithelial Marker Antibody is available for research use only.



Pan Cytokeratin Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of cytokeratin proteins in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using mouse monoclonal antibody clone MSVA-000R. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates strong cytoplasmic localization across epithelial compartments, including glandular, ductal, and stratified epithelia, while stromal, mesenchymal, and lymphoid tissues remain largely negative. Within tumor tissue microarrays, diffuse cytoplasmic staining highlights epithelial tumor cells and clearly delineates carcinoma structures within complex tumor microenvironments. Evaluation across large TMA panels enables direct comparison of cytokeratin expression across diverse tissue types under standardized conditions. The observed staining patterns support its use as a broad epithelial marker for identifying epithelial lineage and visualizing tumor architecture.

Description

Cytokeratins are a large family of intermediate filament proteins expressed in epithelial cells, where they provide structural

support, maintain cellular integrity, and help preserve tissue architecture under mechanical stress. These proteins are divided into type I acidic keratins and type II basic keratins, which pair to form heterodimeric filament networks within the cytoplasm. Because epithelial tissues display diverse cytokeratin expression patterns depending on tissue type and differentiation state, antibodies capable of recognizing multiple keratin isoforms are especially valuable for broad identification of epithelial compartments across a wide range of tissues.

Pan Cytokeratin Antibody for IHC / Broad Spectrum Epithelial Marker Antibody (clone MSVA-000R) is designed for broad detection of epithelial cytokeratin proteins in formalin-fixed, paraffin-embedded tissues. This antibody functions as a comprehensive epithelial marker by recognizing multiple type I and type II cytokeratins rather than a single keratin isoform. Pan cytokeratin antibody, also referred to as cytokeratin cocktail antibody, broad epithelial marker antibody, or CK pan antibody, is widely used in immunohistochemistry to visualize epithelial structures, define epithelial tumor components, and distinguish epithelial elements from surrounding stromal, mesenchymal, and hematopoietic tissues. This pan cytokeratin antibody is also widely used to identify epithelial cells and distinguish carcinomas from non-epithelial malignancies in immunohistochemistry.

Because this antibody recognizes a wide range of keratin proteins, staining is typically strong, cytoplasmic, and filamentous within epithelial cells, reflecting the intermediate filament organization of the cytoskeleton. This broad-spectrum pattern differs fundamentally from isoform-specific keratin antibodies, which are intended to define particular epithelial subsets or differentiation programs. In contrast, a pan cytokeratin antibody is positioned to provide an inclusive view of epithelial distribution, making it especially useful when the goal is to identify epithelial lineage broadly rather than characterize a specific keratin subtype.

In tissue microarray analysis, this broad epithelial coverage becomes particularly valuable. Human tissue microarrays allow simultaneous assessment of many normal and cancer tissues under identical staining conditions, making them highly informative for evaluating the scope and consistency of epithelial marker expression. In this setting, pan cytokeratin staining highlights glandular, ductal, mucosal, transitional, and stratified epithelial compartments across multiple organs, while most non-epithelial tissues remain negative or show only limited background. This strong contrast supports rapid recognition of epithelial architecture and enables efficient comparison of epithelial staining patterns across tissue types.

In normal tissues, pan cytokeratin staining typically outlines epithelial layers and epithelial-derived glandular structures with high clarity, emphasizing luminal borders, ductal arrangements, and epithelial continuity. This makes the antibody useful for examining tissue organization and confirming epithelial identity in histologic sections. In TMA-based normal tissue profiling, the broad distribution of cytokeratin-positive structures provides a clear map of epithelial localization across organ systems and reinforces the utility of this antibody as a high-coverage epithelial marker.

In cancer tissue arrays, pan cytokeratin antibodies are especially important for identifying carcinomas and defining the distribution of epithelial tumor cells within complex malignant lesions. Strong cytoplasmic staining in carcinoma cells helps distinguish epithelial-derived neoplasms from non-epithelial malignancies such as lymphoid, mesenchymal, or many sarcomatous tumors. This broad epithelial labeling is also useful for visualizing invasive tumor architecture, highlighting nests, glands, cords, and sheets of tumor cells embedded within reactive stroma or inflammatory infiltrates. For this reason, pan cytokeratin antibodies remain among the most widely used reagents for epithelial tumor detection in immunohistochemistry.

Because this antibody is intended for broad keratin recognition, it should be positioned as a pan-epithelial detection reagent rather than an isoform-specific antibody. Individual keratins such as KRT77, KRT76, CK7, CK19, or other epithelial keratin proteins may be included within its broad reactivity profile, but the primary value of this reagent lies in comprehensive epithelial coverage rather than selective subtype discrimination. This distinction is important when organizing keratin antibody portfolios, since pan cytokeratin antibodies serve a different research purpose than keratin-specific antibodies directed against restricted epithelial subsets.

As a recombinant rabbit monoclonal antibody, clone MSVA-000R offers consistent epitope recognition and reliable staining performance across tissue types. Combined with broad cytokeratin reactivity and strong TMA-based epithelial

labeling, Pan Cytokeratin Antibody for immunohistochemistry provides a robust tool for epithelial identification, carcinoma visualization, and large-scale assessment of epithelial distribution across normal and cancer tissues.

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

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the Pan Cytokeratin Antibody for IHC / Broad Spectrum Epithelial Marker Antibody should be determined by the researcher.

2. This Pan Cytokeratin antibody is recombinantly produced by expression in human HEK293 cells.

Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

Recombinant fragments and synthetic peptides derived from human cytokeratin proteins were used as the immunogen for the pan cytokeratin antibody. The antigen design supports recognition of multiple type I (acidic) and type II (basic) cytokeratins, including CK1, CK3, CK4, CK5, CK6, CK7, CK8, CK10, CK13, CK14, CK15, CK16, CK17, CK18, CK19, and CK20.

Storage

Pan Cytokeratin antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

Pan cytokeratin antibody, cytokeratin cocktail antibody, broad epithelial marker antibody, CK pan antibody, multi-cytokeratin antibody, epithelial cytokeratin antibody