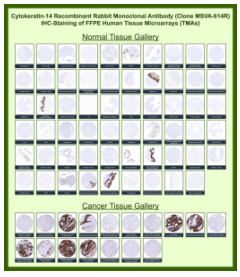
Cytokeratin 14 Antibody for IHC / KRT14 Immunohistochemistry Antibody - Basal Cell Marke [clone MSVA-614R] (V5932)

Catalog No.	Formulation	Size
V5932-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5932-20UG	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-614R
UniProt	P02533
Localization	Cytoplasm, Nucleus
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This Basal cell keratin/Cytokeratin 14 antibody for IHC is available for research use only.



Cytokeratin 14 Antibody IHC TMA Staining. Immunohistochemistry analysis of Cytokeratin 14 (KRT14) expression in FFPE human tissue microarray panels demonstrates strong cytoplasmic HRP-DAB brown staining restricted to basal epithelial cells across stratified tissues, including skin, esophagus, cervix, and urothelium, with clear absence of signal in suprabasal layers and most non-epithelial tissues. Clone MSVA-614R highlights consistent basal cell localization across multiple tissue cores, with prominent staining in squamous cell carcinomas and basal-like tumor populations, while non-squamous malignancies such as adenocarcinomas remain largely negative. The observed TMA staining pattern supports Cytokeratin 14 as a basal epithelial marker and aligns with established KRT14 expression profiles in stratified epithelial tissues.

Description

Cytokeratin 14 (KRT14) is a type I intermediate filament protein expressed predominantly in the basal layer of stratified epithelia, where it plays a critical role in maintaining structural integrity and supporting epithelial stem and progenitor cell populations. Cytokeratin 14 Antibody for IHC is widely used to detect KRT14 expression in formalin-fixed, paraffin-embedded tissues, enabling detailed analysis of basal cell distribution, epithelial organization, and tissue regeneration.

Cytokeratin 14 antibody, also known as KRT14 antibody or CK14 antibody, is a well-established marker of basal epithelial cells in squamous and glandular tissues.

KRT14 is typically co-expressed with keratin 5 in basal epithelial cells of tissues such as skin, esophagus, cervix, and urothelium, where it defines the proliferative compartment responsible for epithelial renewal. Its expression is tightly restricted to basal layers and is absent in differentiated suprabasal cells, providing a clear contrast with markers such as Cytokeratin 13 that label more differentiated epithelial compartments. This distinct layer-specific distribution makes Cytokeratin 14 a key marker for evaluating epithelial hierarchy and basal cell biology.

This Cytokeratin 14 Antibody for IHC incorporates clone MSVA-614R, a monoclonal antibody evaluated using tissue microarray (TMA) analysis across a broad spectrum of normal and cancer tissues. TMA data demonstrate highly consistent cytoplasmic staining restricted to basal epithelial cells across multiple tissue types, with minimal background in non-epithelial or stromal compartments. The large-scale TMA approach enables direct comparison of KRT14 expression patterns across diverse tissues and disease states within a standardized experimental framework.

In immunohistochemistry, Cytokeratin 14 antibody staining appears as strong cytoplasmic HRP-DAB brown signal confined to basal cell layers, with sharp delineation from suprabasal epithelial cells and surrounding non-epithelial tissues. TMA-based cancer panels further demonstrate robust KRT14 expression in squamous cell carcinomas and basal-like tumor populations, where staining highlights proliferative tumor compartments, while most non-squamous malignancies, including adenocarcinomas and many glandular tumors, show little to no staining. This differential expression provides clear contrast for identifying basal cell phenotype and squamous lineage.

The detection of KRT14 is particularly valuable in studies of epithelial development, regeneration, and disease progression, as expansion or disruption of basal cell populations is a hallmark of dysplasia and carcinoma development in stratified epithelia. Changes in staining distribution and intensity can therefore provide insight into alterations in epithelial organization and tumor biology.

Overall, Cytokeratin 14 antibody reagents provide reliable and specific detection of KRT14 in basal epithelial cells, supporting immunohistochemical analysis of epithelial structure, basal cell identity, and disease-associated alterations in stratified epithelial tissues, with strong validation across tissue microarray datasets.

This antibody is part of a broader Cytokeratin 14 antibody collection supporting basal epithelial cell analysis and tissue differentiation studies.

Application Notes

1. Optimal dilution of the Basal cell keratin/Cytokeratin 14 Antibody for IHC should be determined by the researcher.

2. This KRT14/Type I cytoskeletal keratin 14 antibody is recombinantly produced by expression in human HEK293 cells.

3. 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 human KRT14 fragment (around amino acids 350-472) (exact sequence is proprietary) was used as the immunogen for the Basal cell keratin/Cytokeratin 14 antibody for IHC.

Storage

Basal cell keratin/Cytokeratin 14 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

KRT14 antibody, Cytokeratin 14 IHC antibody, CK14 antibody, Basal epithelial marker antibody