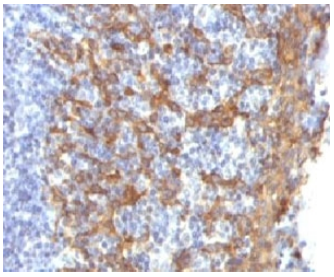
Keratin 14 Antibody / KRT14 [clone CTKN14-1] (V7121)

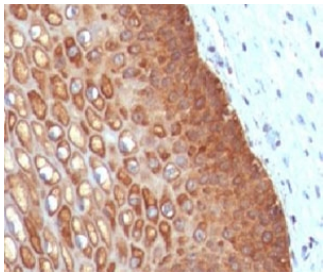
Catalog No.	Formulation	Size
V7121-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7121-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7121SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V7121IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG3
Clone Name	CTKN14-1
Purity	Protein G affinity chromatography
UniProt	P02533
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT (1) Prediluted IHC Only Format : incubate for 30 min at RT (2)
Limitations	This Keratin 14 antibody is available for research use only.



Immunohistochemistry of Keratin 14 / KRT14 in human prostate tissue. Formalin-fixed, paraffin-embedded human prostate tissue stained with Keratin 14 antibody (clone CTKN14-1) shows cytoplasmic staining in a subset of epithelial cells, with signal localized to basal-type cells, while surrounding stromal and luminal epithelial cells show minimal staining. Antigen retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 10-20 minutes, followed by cooling at room temperature for 20 minutes.



Immunohistochemistry of Keratin 14 / KRT14 in human cervix tissue. Formalin-fixed, paraffin-embedded human cervix tissue stained with Keratin 14/KRT14 antibody (clone CTKN14-1) shows strong cytoplasmic staining in basal and parabasal squamous epithelial cells, with reduced staining in more superficial differentiated layers and minimal signal in adjacent stromal tissue. Antigen retrieval was performed by boiling tissue sections in 10 mM Tris with 1 mM EDTA, pH 9.0, for 10-20 minutes, followed by cooling at room temperature for 20 minutes.

Description

Keratin 14/KRT14 antibody recognizes Cytokeratin 14, a type I intermediate filament protein that forms an essential structural component of the cytoskeleton in basal epithelial cells. Keratin 14 is encoded by the KRT14 gene and is primarily expressed in the basal layer of stratified squamous epithelia, where it pairs with Keratin 5 to form obligate heterodimers. This keratin network provides mechanical resilience and structural integrity to epithelial tissues subjected to continuous stress and regeneration.

Keratin 14, also widely referred to in the literature as Cytokeratin 14 or CK14, plays a critical role in maintaining epithelial homeostasis by supporting cell shape, anchorage, and resistance to mechanical injury. In normal tissue architecture, CK14 expression is characteristic of proliferative basal keratinocytes, distinguishing these cells from more differentiated suprabasal layers that express alternative keratin pairs. As a result, Keratin 14 antibodies are commonly used to identify basal epithelial populations in skin, oral mucosa, esophagus, and other stratified epithelia.

KRT14 has particular importance in dermatological and developmental biology research. Genetic alterations affecting Keratin 14 expression or structure are associated with epidermal fragility disorders, including forms of epidermolysis bullosa simplex, highlighting its essential role in epithelial stability. In experimental systems, Keratin 14 expression is frequently used as a marker of basal cell identity, epithelial progenitor populations, and early stages of epithelial differentiation.

In oncology research, Keratin 14 has emerged as a valuable marker for defining tumor cell phenotype and differentiation status. Expression of KRT14 or Cytokeratin 14 is often associated with basal-like characteristics in squamous cell carcinomas and certain subtypes of breast and other epithelial cancers. Detection of Keratin 14 can therefore aid in characterizing tumor heterogeneity, invasive behavior, and lineage relationships within complex epithelial malignancies. Use of a Keratin 14 antibody supports investigation of basal epithelial markers in both normal and pathological contexts.

Keratin 14/KRT14 antibody (clone CTKN14-1) is designed to detect Keratin 14 in research applications. In tissue-based analyses, staining is typically localized to the cytoplasm of basal epithelial cells, consistent with the intermediate filament distribution of CK14. This antibody enables assessment of basal epithelial cell populations, epithelial differentiation states, and keratin expression patterns in a wide range of experimental and pathology-focused studies.

Application Notes

Optimal dilution of the Keratin 14 antibody should be determined by the researcher.

1. 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

Recombinant full-length human KRT14 protein was used as the immunogen for the Keratin 14 antibody.

Storage

Store the Keratin 14 antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).