Cytokeratin 14 Antibody LL002 / CK14 Monoclonal Antibody [clone LL002] (V2175)

Catalog No.	Formulation	Size
V2175-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2175-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2175SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2175IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

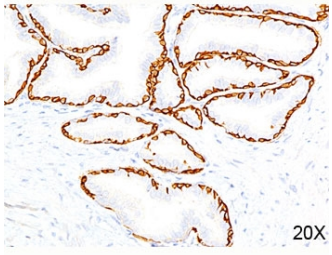
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Bulk quote request

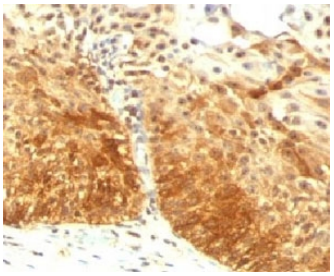
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG3, kappa
Clone Name	LL002
Purity	Protein G affinity chromatography
Buffer	1X PBS, pH 7.4
Gene ID	3861
Localization	Cytoplasmic
Applications	Flow cytometry: 1-2ug/million cells Immunofluorescence: 1-3ug/ml Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT Western blot: 2-4ug/ml
Limitations	This Cytokeratin 14 Antibody LL002 / CK14 Monoclonal Antibody is available for research use only.



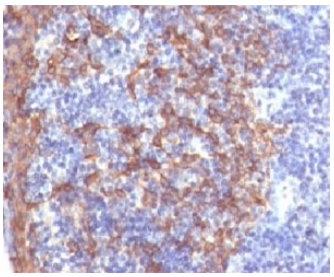
Cytokeratin 14 Antibody LL002 by IHC in Human Prostate at 10X Magnification. Immunohistochemistry of human prostate tissue using Cytokeratin 14 Antibody LL002. Brown staining outlines the basal epithelial cells surrounding numerous prostatic glands, creating a distinct pattern against the predominantly unstained glandular lumens and surrounding stromal tissue. The CK14 Monoclonal Antibody highlights the distribution of cytokeratin 14 in the basal epithelial compartment. Nuclei are counterstained blue with hematoxylin. The 10X magnification provides an overview of basal cell staining across multiple glandular structures.



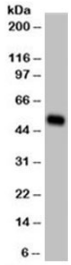
Cytokeratin 14 Antibody LL002 by IHC in Human Prostate at 20X Magnification. Immunohistochemistry of human prostate tissue using Cytokeratin 14 Antibody LL002. Brown cytoplasmic staining is concentrated in the basal epithelial cells lining prostatic glands, forming a distinct peripheral staining pattern around the glandular structures. The luminal epithelial cells and surrounding stromal tissue exhibit comparatively little immunoreactivity. The CK14 Monoclonal Antibody demonstrates the characteristic basal cell distribution of cytokeratin 14. Nuclei are counterstained blue with hematoxylin. The 20X magnification provides a closer view of the stained basal epithelial layer.



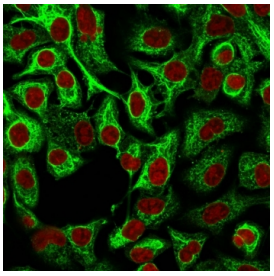
Cytokeratin 14 Antibody LL002 by IHC in FFPE Human Prostate. Immunohistochemistry of FFPE human prostate tissue using Cytokeratin 14 Antibody LL002. Strong brown cytoplasmic immunoreactivity is observed in a dense epithelial cell population, with staining distributed throughout much of the visible tissue. Individual cells exhibit variable staining intensity, while nuclei are counterstained blue with hematoxylin. The CK14 Monoclonal Antibody demonstrates prominent epithelial immunoreactivity in this specimen, providing an additional example of cytokeratin 14 detection in prostate tissue.



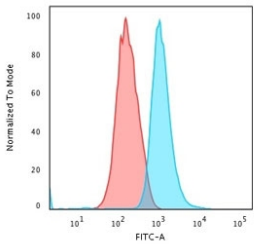
Cytokeratin 14 Antibody LL002 by IHC in FFPE Human Prostate. Immunohistochemistry of FFPE human prostate tissue using Cytokeratin 14 Antibody LL002. Brown immunoreactivity is distributed among epithelial cell populations, with areas of stronger staining interspersed with regions exhibiting weaker or absent staining. The CK14 Monoclonal Antibody highlights a heterogeneous staining pattern within the tissue section. Nuclei are counterstained blue with hematoxylin, providing contrast against the brown cytoplasmic signal. This image demonstrates antibody immunoreactivity in an additional region of human prostate tissue.



Cytokeratin 14 Antibody LL002 by WB in Human A431 Cells. Western blot analysis of human A431 epidermoid carcinoma cell lysate using Cytokeratin 14 Antibody LL002 at 1 ug/ml. A single prominent immunoreactive band is observed at approximately 53 kDa, consistent with the predicted molecular weight of cytokeratin 14. The band migrates between the 44 kDa and 66 kDa molecular weight markers, with its position corresponding closely to the expected size of KRT14. No additional prominent bands are visible within the displayed molecular weight range. The CK14 Monoclonal Antibody demonstrates detection of a protein migrating at the expected molecular weight of cytokeratin 14 in A431 cell lysate.



Cytokeratin 14 Antibody LL002 by IF in Human A549 Cells. Immunofluorescence staining of human A549 lung carcinoma cells using Cytokeratin 14 Antibody LL002. Strong green fluorescence is observed throughout the cytoplasm, with a filamentous staining pattern extending around the nuclei and toward the cell periphery. The CK14 Monoclonal Antibody highlights the cytoplasmic distribution of cytokeratin 14, consistent with its association with intermediate filament networks. Nuclei are counterstained red using Reddot nuclear stain. The merged image demonstrates prominent cytoplasmic immunoreactivity with clear separation between the green antibody signal and red nuclear staining.



Cytokeratin 14 Antibody LL002 by FACS in Human HeLa Cells. Flow cytometry analysis of methanol-fixed human HeLa cells using Cytokeratin 14 Antibody LL002. The blue histogram representing antibody staining exhibits a pronounced rightward fluorescence shift relative to the red isotype control histogram. The two populations show substantial separation, with antibody-treated cells displaying greater fluorescence intensity. The CK14 Monoclonal Antibody demonstrates immunoreactivity in methanol-fixed HeLa cells under the tested conditions.

Description

Cytokeratin 14 Antibody LL002 recognizes keratin 14 (KRT14), a type I intermediate filament protein that is predominantly expressed in the basal layers of stratified squamous epithelia. Encoded by the KRT14 gene on chromosome 17, this protein is an essential structural component of basal keratinocytes in the epidermis, oral mucosa, esophagus, and other epithelial tissues. Cytokeratin 14 is also expressed in basal and myoepithelial cells of certain glandular tissues. Its characteristic distribution makes CK14 an important marker for identifying basal epithelial populations, investigating epithelial differentiation, and examining tissue regeneration. Expression of KRT14 is frequently evaluated in studies of skin biology, epithelial progenitor cells, and changes in cellular phenotype associated with disease.

Keratin 14 forms heterodimers with keratin 5, a type II intermediate filament protein, creating the principal keratin pair of basal keratinocytes. These proteins assemble into intermediate filament networks that provide mechanical stability and connect with desmosomes and hemidesmosomes through associated proteins. Their organization helps epithelial cells withstand mechanical stress and maintain tissue integrity. During keratinocyte differentiation, KRT14 expression generally decreases as cells migrate into suprabasal compartments, where other keratin pairs become more prominent. Keratins 1 and 10 characterize keratinizing epidermis, while keratins 4 and 13 are associated with nonkeratinized mucosal epithelia.

Pathogenic variants in KRT14 are associated with epidermolysis bullosa simplex, an inherited disorder characterized by skin fragility and blister formation. Cytokeratin 14 is also widely investigated in squamous cell carcinomas, basal-like breast cancers, and other epithelial malignancies. Its expression helps researchers characterize basal differentiation and identify changes in epithelial phenotype associated with tumor development. In breast cancer research, KRT14 is frequently examined alongside KRT5 and other basal markers to investigate tumor heterogeneity, cellular plasticity, and invasive behavior. Studies of wound healing also use KRT14 expression to examine basal keratinocyte proliferation and epithelial regeneration.

NSJ Bioreagents offers mouse monoclonal clone LL002, developed against a synthetic 15-amino-acid peptide from the C-terminal region of human cytokeratin 14. The antibody is validated for western blotting, immunohistochemistry, immunofluorescence, and flow cytometry, with reported reactivity in human, mouse, and rat samples. Its extensive use in published research makes LL002 a well-established clone for investigating epithelial intermediate filaments. The CK14 Monoclonal Antibody supports studies of basal epithelial differentiation, tissue organization, and keratin-associated pathology. A Cytokeratin 14 Antibody such as LL002 provides a useful reagent for investigating skin biology, epithelial regeneration, and tumor-associated changes in cellular differentiation.

Explore our KRT14 Antibody KRT14/4128 for investigating cytokeratin 14 expression, basal epithelial differentiation, and intermediate filament organization in normal and diseased tissues.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the Cytokeratin 14 Antibody LL002 / CK14 Monoclonal Antibody to be titered up or down for optimal performance.

1. Staining of formalin-fixed tissues requires boiling tissue sections in 10mM Citrate Buffer, pH 6.0, for 10-20 min followed

by cooling at RT for 20 minutes.
2. 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

A synthetic peptide of 15 amino acid from the C-terminus of human Cytokeratin 14 was used as the immunogen for the Cytokeratin 14 Antibody LL002.

Storage

Store the Cytokeratin 14 Antibody LL002 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Keratin 14 antibody, CK14 antibody, KRT14 antibody, Cytokeratin-14 antibody, Type I Cytoskeletal Keratin 14 antibody

References (1)

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