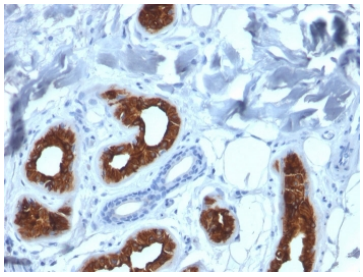
Cytokeratin 3 Antibody KRT3/2130 / KRT3 Monoclonal Antibody [clone KRT3/2130] (V7909)

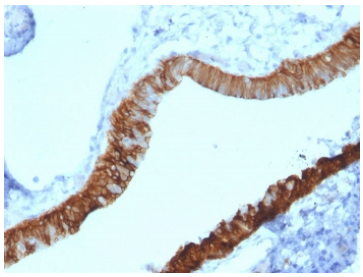
Catalog No.	Formulation	Size
V7909-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V7909-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V7909SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

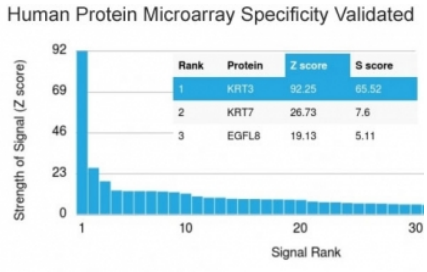
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	KRT3/2130
Purity	Protein G affinity chromatography
UniProt	P12035
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Cytokeratin 3 Antibody KRT3/2130 / KRT3 Monoclonal Antibody is available for research use only.



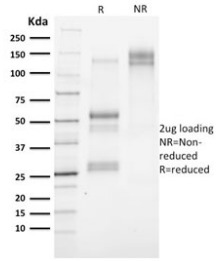
Cytokeratin 3 Antibody KRT3/2130 by IHC in Human Skin. Immunohistochemistry of FFPE human skin tissue using Cytokeratin 3 Antibody KRT3/2130. Strong brown DAB staining is observed in the epithelial cells lining several glandular or duct-like structures within the tissue, while much of the surrounding connective tissue remains unstained. The KRT3 Monoclonal Antibody produces predominantly cytoplasmic staining in these epithelial structures, with nuclei counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed using 10 mM Tris with 1 mM EDTA, pH 9, for 20 minutes, followed by cooling before antibody incubation.



Cytokeratin 3 Antibody KRT3/2130 by IHC in Human Ovary. Immunohistochemistry of FFPE human ovarian tissue using Cytokeratin 3 Antibody KRT3/2130. Strong brown DAB staining is observed in the cytoplasm of epithelial cells lining a curved tissue surface, with relatively little staining in the adjacent stromal tissue. The KRT3 Monoclonal Antibody highlights the epithelial lining, while nuclei are counterstained blue with hematoxylin. Heat-induced epitope retrieval was performed using 10 mM Tris with 1 mM EDTA, pH 9, for 20 minutes, followed by cooling before antibody incubation.



Cytokeratin 3 Antibody KRT3/2130 by Protein Microarray. Protein microarray specificity analysis of Cytokeratin 3 Antibody KRT3/2130 using a HuProt human protein microarray containing more than 19,000 full-length proteins. The graph displays ranked antibody-binding signals, with KRT3 identified as the highest-ranking target. The pronounced separation between the leading signal and subsequent proteins supports preferential recognition of KRT3 under the assay conditions. Z-scores represent binding signal intensity relative to the array mean, while S-scores describe the separation between ranked protein signals. These results support the specificity of clone KRT3/2130 in this protein microarray assay.



Cytokeratin 3 Antibody KRT3/2130 by SDS-PAGE. SDS-PAGE analysis of purified, BSA-free Cytokeratin 3 Antibody KRT3/2130 under reducing (R) and non-reducing (NR) conditions, with 2 ug of antibody loaded per lane. The reducing lane shows bands near 50 kDa and 25 kDa, corresponding to the expected immunoglobulin heavy and light chains. The non-reducing lane contains a prominent band migrating near 150 kDa, consistent with intact IgG. The electrophoretic profile demonstrates the expected molecular components of the purified mouse monoclonal antibody preparation.

Description

Cytokeratin 3 Antibody KRT3/2130 recognizes keratin 3 (KRT3), a type II intermediate filament protein expressed predominantly in differentiated corneal epithelial cells. Also known as CK3 or cytokeratin 3, this approximately 64 kDa protein is encoded by the KRT3 gene on chromosome 12q13.13. KRT3 contributes to the structural organization and mechanical stability of the corneal epithelium, which forms the outermost protective layer of the cornea. Its expression is associated with epithelial differentiation and the maintenance of corneal surface integrity.

KRT3 typically forms heterodimers with keratin 12 (KRT12), a type I intermediate filament protein that is also characteristic of differentiated corneal epithelial cells. These heterodimers assemble into higher-order intermediate filament networks that help epithelial cells withstand mechanical stress. During corneal epithelial maturation, expression of KRT3 and KRT12 increases as cells differentiate and move toward the superficial epithelial layers. Their coordinated expression provides a useful indicator of corneal epithelial identity and differentiation. Unlike the cornea, other stratified epithelia generally express different keratin combinations, reflecting their distinct structural and functional requirements.

Mutations in KRT3 are associated with Meesmann corneal dystrophy, an inherited disorder characterized by the development of numerous small intraepithelial cysts within the cornea. Affected individuals may experience irritation, photophobia, recurrent epithelial erosions, and visual disturbances. Disease-associated variants can disrupt keratin filament organization and compromise the mechanical resilience of corneal epithelial cells. Mutations in KRT12 can produce a similar phenotype, emphasizing the functional relationship between these two keratin proteins. KRT3 is consequently investigated in studies of corneal dystrophy, epithelial injury, ocular surface disease, and regenerative medicine.

KRT3 expression is also used to evaluate corneal epithelial differentiation in cultured cells, stem cell-derived epithelial populations, and experimental models of ocular surface reconstruction. Its detection can help distinguish differentiated

corneal epithelial cells from other epithelial lineages when interpreted alongside additional markers such as KRT12. NSJ Bioreagents offers mouse monoclonal clone KRT3/2130, developed using recombinant full-length human KRT3 and supported by immunohistochemistry and protein microarray validation. A Cytokeratin 3 Antibody provides a useful tool for investigating corneal epithelial differentiation, intermediate filament organization, and disorders affecting the ocular surface.

Explore our Cytokeratin 3 Antibodies for investigating corneal epithelial differentiation, intermediate filament organization, and KRT3 expression in ocular surface research.

Application Notes

Optimal dilution of the Cytokeratin 3 Antibody KRT3/2130 / KRT3 Monoclonal Antibody should be determined by the researcher.

Immunogen

A recombinant full-length human protein was used as the immunogen for this Cytokeratin 3 Antibody KRT3/2130.

Storage

Store the Cytokeratin 3 Antibody KRT3/2130 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Keratin 3 antibody, KRT3 antibody, CK3 antibody, Cytokeratin-3 antibody, Keratin Type II Cytoskeletal 3 antibody, Corneal Keratin 3 antibody

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