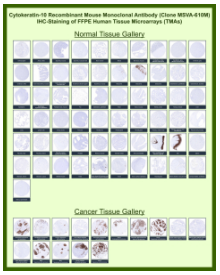
KRT10 Antibody / Keratin 10 [clone MSVA-610M] (V5928)

Catalog No.	Formulation	Size
V5928-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5928-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG1, kappa
Clone Name	MSVA-610M
UniProt	P13645
Localization	Cell surface, Extracellular space, Secreted
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This KRT10/Keratin 10 antibody is available for research use only.



Immunohistochemistry analysis of Keratin 10 / KRT10 antibody (clone MSVA-610M) in FFPE human tissues. Formalin-fixed, paraffin-embedded human tissue microarrays show cytoplasmic brown chromogenic staining in suprabasal keratinocytes of stratified squamous epithelia, consistent with Keratin 10-positive differentiated epithelial cells, while most non-squamous tissues show minimal or no staining. Cancer tissue cores demonstrate Keratin 10 expression in squamous cell carcinomas, with reduced or absent staining in non-squamous malignancies.

Description

KRT10 antibody targets Keratin 10, a type I cytoskeletal intermediate filament protein encoded by the KRT10 gene and a defining marker of terminal keratinocyte differentiation in stratified squamous epithelia. Keratin 10 is induced as epidermal keratinocytes exit the basal proliferative compartment and commit to suprabasal differentiation, where it pairs predominantly with Keratin 1 to form stable intermediate filament networks. These filaments provide mechanical strength and structural support to the epidermis, contributing to barrier formation and tissue resilience. Because of this biology, KRT10 antibody reagents are widely used to investigate epidermal maturation and epithelial differentiation programs.

In normal tissues, Keratin 10 expression is largely restricted to suprabasal layers of the epidermis and other stratified squamous epithelia, showing a characteristic cytoplasmic filamentous staining pattern. Basal keratinocytes typically lack Keratin 10 expression and instead express basal keratins such as Keratin 5 and Keratin 14. This sharply compartmentalized distribution makes KRT10 antibody a valuable tool for distinguishing differentiated suprabasal keratinocytes from proliferative basal cells and for assessing the integrity of epidermal stratification in experimental models.

Keratin 10 also has important relevance in dermatopathology and epithelial disease research. Reduced, absent, or aberrant Keratin 10 expression is frequently observed in hyperproliferative skin disorders, inflammatory dermatoses, and conditions associated with impaired keratinocyte differentiation. In squamous cell carcinoma and related epithelial malignancies, KRT10 antibody staining can assist in evaluating tumor differentiation status, as well-differentiated lesions often retain Keratin 10 expression, whereas poorly differentiated tumors show diminished or lost staining. Genetic disorders of keratinization, including epidermolytic hyperkeratosis, further underscore the functional importance of Keratin 10 in maintaining keratinocyte stability.

At the molecular level, Keratin 10 belongs to the acidic type I keratin family and contains conserved alpha-helical domains required for heterodimerization and filament assembly. Its expression is regulated by calcium-dependent signaling pathways and differentiation-associated transcriptional programs. A KRT10 antibody therefore provides a robust reagent for studying epidermal biology, keratinocyte differentiation, and disease-associated alterations in stratified squamous epithelia.

Application Notes

1. Optimal dilution of the KRT10/Keratin 10 antibody should be determined by the researcher.

2. This KRT10/Keratin 10 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 full-lenth human KRT10 protein was used as the immunogen for the KRT10/Keratin 10 antibody.

Storage

KRT10/Keratin 10 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.