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Anti-Cytokeratin 14 Antibody

Catalog # AP95915

Product Information

Application	WB, IHC, FC, IF/IC
Primary Accession	P02533
Reactivity	Human, Mk
Host	Mouse
Clonality	Monoclonal
Calculated MW	51561

Additional Information

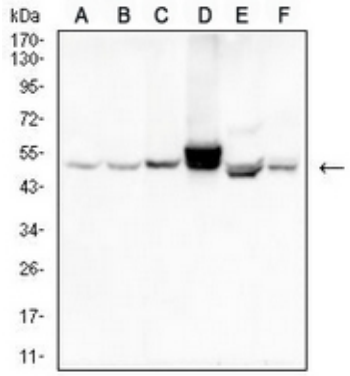
Gene ID	3861
Other Names	Keratin, type I cytoskeletal 14; Cytokeratin-14; CK-14; Keratin-14; K14
Target/Specificity	Recombinant fusion protein of human Cytokeratin 14 expressed in E. Coli
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 FC~~FC (1/100 - 1/200) IF/IC~~N/A
Format	Mouse IgG1. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

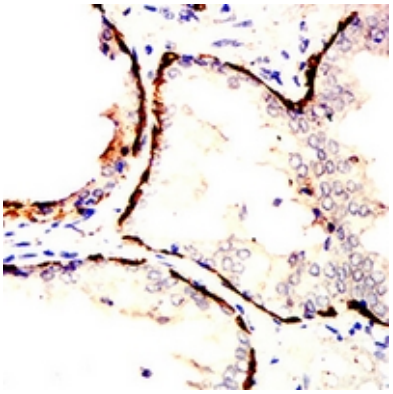
Name	KRT14 (HGNC:6416)
Function	Structural component of intermediate filaments in basal keratinocytes of stratified epithelia. Forms heteropolymers with type II keratin KRT5, contributing to the keratin intermediate filament network that confers mechanical strength and structural integrity to the basal layer of the epidermis and other stratified epithelial (PubMed:11724817, PubMed:1694855, PubMed:1720261, PubMed:41511042). The nonhelical tail domain is involved in promoting KRT5-KRT14 filaments to self-organize into large bundles and enhances the mechanical properties involved in resilience of keratin intermediate filaments in vitro (PubMed:11724817). Displays an antagonist role with KRT15 in basal epithelial cells, where KRT14 promotes cell differentiation while KRT15 maintains the progenitor state and promotes proliferation and clonogenicity (PubMed:41511042). Promotes cell differentiation by retaining YAP1 in the cytoplasm of basal keratinocytes via regulatory residue C367 and stratifin/SNF interaction (PubMed:41511042). Contributes to airway basal cell differentiation after injury (PubMed:36512409).
Cellular Location	Cytoplasm. Nucleus. Note=Expressed in both as a filamentous pattern.

Tissue Location	Expressed in the corneal epithelium (at protein level) (PubMed:26758872). Detected in the basal layer, lowered within the more apically located layers specifically in the stratum spinosum, stratum granulosum but is not detected in stratum corneum. Strongly expressed in the outer root sheath of anagen follicles but not in the germinative matrix, inner root sheath or hair (PubMed:9457912). Found in keratinocytes surrounding the club hair during telogen (PubMed:9457912). Expressed in gland ducts and in the myoepithelial cells of gland tubules and acini in pulmonary bronchus (PubMed:36512409).

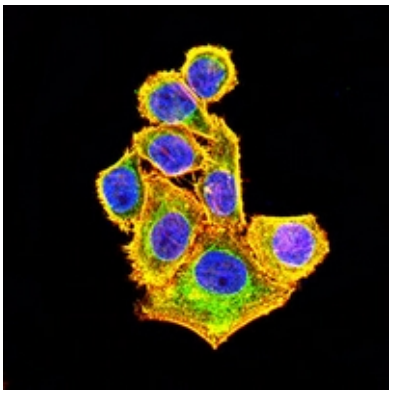
Images



Western blot analysis of Cytokeratin 14 expression in MCF7 (A), Hela (B), A431 (C), SW480 (D), T47D (E), Molt4 (F) whole cell lysates. (Predicted band size: 52 kD; Observed band size: 52 kD)

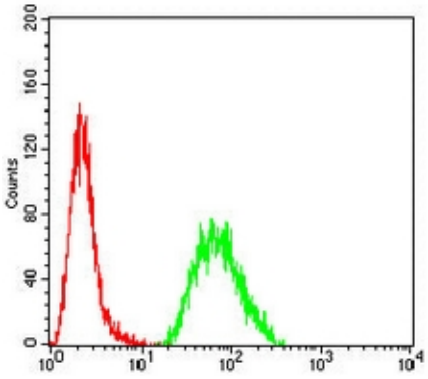


Immunohistochemical analysis of Cytokeratin 14 staining in human prostate cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of Cytokeratin 14 staining in Hela cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with an AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Flow cytometric analysis of HeLa cells using Anti-Cytokeratin 14 Antibody (green) and negative control (red).



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