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Cytokeratin 14 (KRT14) (Squamous Cell Marker) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone SPM263]
Catalog # AH10563

Product Information

Application	IF, FC, IHC-P
Primary Accession	P02533
Other Accession	3861, 6545380
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG3
Clone Names	SPM263
Calculated MW	51561

Additional Information

Gene ID	3861
Other Names	Keratin, type I cytoskeletal 14, Cytokeratin-14, CK-14, Keratin-14, K14, KRT14
Application Note	IF~~1:50~200 FC~~1:10~50 IHC-P~~N/A
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Cytokeratin 14 (KRT14) (Squamous Cell Marker) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

Cytokeratin 14 (CK14) belongs to the type I (or A or acidic) subfamily of low molecular weight keratins and exists in combination with keratin 5 (type II or B or basic). CK14 is found in basal cells of squamous epithelia, some glandular epithelia, myoepithelium, and mesothelial cells. Anti-CK14 is useful in differentiating squamous cell carcinomas from poorly differentiated epithelial tumors. Anti-CK14 is one of the specific basal markers for distinguishing between basal and non-basal subtypes of breast carcinomas. Anti-CK14 is also a good marker for differentiation of intraductal from invasive salivary duct carcinoma by the positive staining of basal cells surrounding the in-situ neoplasm as well as for differentiation of benign prostate from prostate carcinoma. Furthermore, this antibody has been useful in separating oncocytic tumors of the kidney from its renal mimics, and in identifying metaplastic carcinomas of the breast.

References

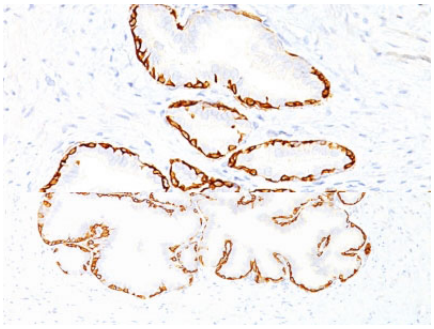
Perkins W et. al. J Cutaneous Pathol, 1992, 19(6):476-82. | Kasper M. Histochemistry, 1991, 95(6):613-20. | Leigh I M et. al. (1988) Dermatology, 91:415

Images



Formalin-fixed, paraffin-embedded human Prostate Carcinoma stained with Cytokeratin 14 Monoclonal Antibody (SPM263).

Formalin-fixed, paraffin-embedded human Prostate Carcinoma stained with Cytokeratin 14 Monoclonal Antibody (SPM263).



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