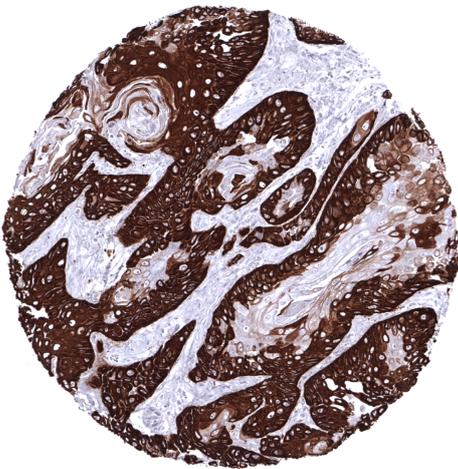


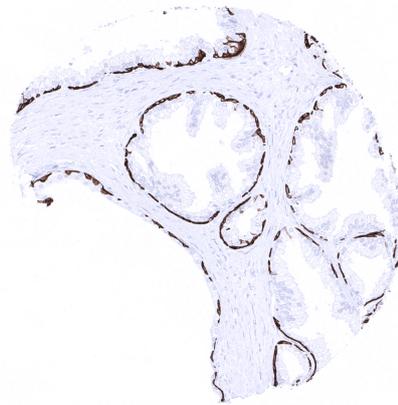
Anti-Cytokeratin 14 Antibody MSVA-614R / Recombinant Rabbit monoclonal

Human SwissProt	P02533
Human Gene Symbol	KRT14
Synonyms	CK-14; Dowling Meara; ebs3; ebs4; Epidermolysis Bullosa Simplex; Keratin Type I Cytoskeletal 14; Koebner; NFJ
Specificity	Cytokeratin 14
Immunogen	Recombinant human KRT14 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasmic

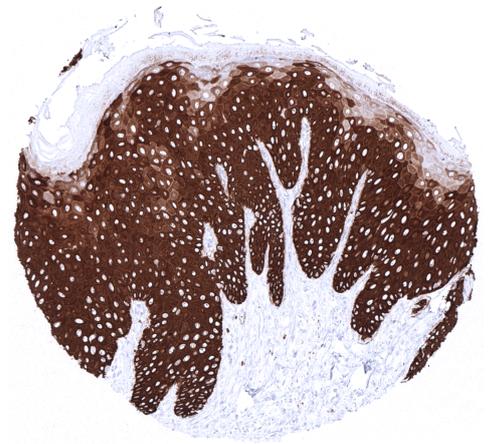
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	A strong KRT14 immunostaining should be seen in the surface and crypt epithelium.
Negative Control	KRT14 immunostaining should be absent in all non-epithelial cells.



Squamous cell carcinoma of the esophagus with strong, predominantly basal KRT14 immunostaining.



Strong KRT14 positivity in basal cells of the prostate.



Squamous epithelium of skin with strong KRT14 immunostaining.

Biology

Cytokeratin 14 (CK14), also termed keratin 14 (KRT14) is a type I acidic 50 kDa keratin protein encoded by the KRT14 gene at 17q21.2. KRT14 is part of the cytoskeletal scaffold within epithelial cells, which contributes to the cell architecture and provides the cells with the ability to withstand mechanical stress. Keratin 14 is usually found as a heterodimer with type II keratin 5. Mutations in KRT14 are associated with epidermolysis bullosa simplex and dermatopathia pigmentosa reticularis. Among normal tissues, KRT14 is primarily expressed in the skin and in non-keratinizing squamous epithelium. Strong KRT14 positivity is also seen in sebaceous glands and hair follicles, epithelial cells and in corpuscles of Hassall's of the thymus and in tonsil crypts, basal cells of the prostate and respiratory epithelium. In salivary glands, cytokeratin 14 is strongly expressed in myoepithelial cells, basal cells, and a fraction of ductal cells of excretory ducts. In tumors, KRT14 expression is seen in the majority of squamous cell carcinomas irrespective of their origin and differentiation. KRT14 also occurs in almost all thymic epithelial tumors, in a large fraction of epitheloid malignant mesothelioma and urothelial carcinomas, and - at lower frequency - also in other cancers.

Potential Research Applications

-The diagnostic utility of KRT14 expression analysis should be investigated in a large cohort of tumors from different entities.

-The prognostic role of KRT14 expression needs to be evaluated for various tumor types.

-Identification of basal and myoepithelial cell types in the prostate, breast and salivary glands (in multicolor immunofluorescence)

Protocol Suggestions

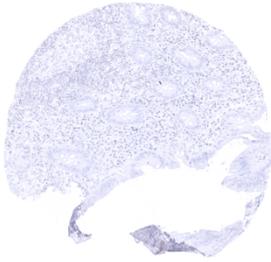
Dilution: 1:50 ; pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

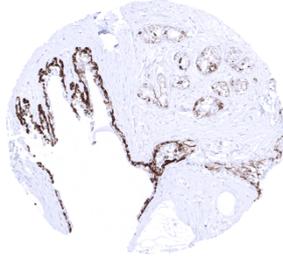
This antibody is available for **research use only** and is not approved for use in diagnostics.
Not for resale without express authorization.

Warranty

There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



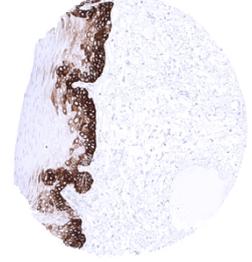
Appendix, mucosa



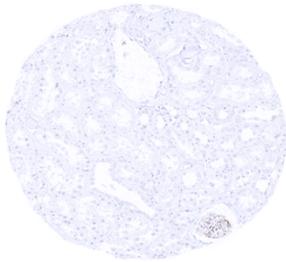
Breast - A variable cytokeratin 14 immunostaining is seen in luminal cells of glands and excretory ducts of the breast gland



Ektocervix - KRT14 staining occurs in all layers of non-keratinizing squamous epithelium, but superficial layers stain sometimes slightly weaker



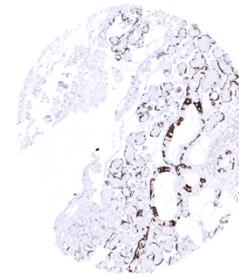
Esophagus, squamous epithelium - KRT14 staining occurs in all layers of non-keratinizing squamous epithelium, but staining can be weaker or absent in superficial layers



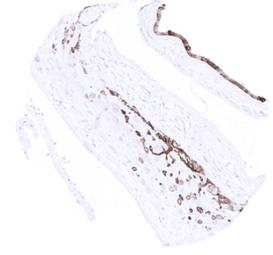
Kidney, cortex



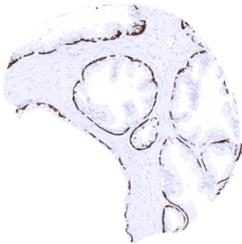
Lung



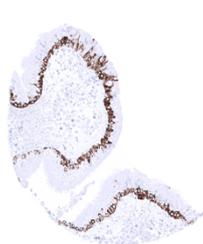
Parotid gland - In salivary glands, cytokeratin 14 is expressed in myoepithelial cells as well as in basal cells and a fraction of ductal cells of excretory ducts



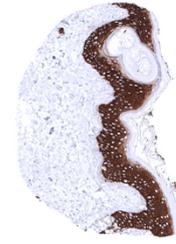
Placenta, mature, amnion and chorion - A moderate to strong KRT14 staining occurs in amnion cells and cytotrophoblastic cells of the placenta



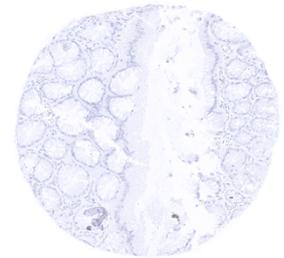
Prostate - cytokeratin 14 is strongly expressed in basal cells of the prostate



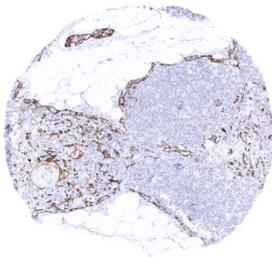
Sinus paranasales - Strong cytokeratin 14 occurs in basal cells of the respiratory epithelium



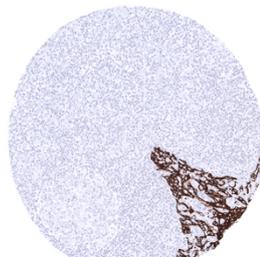
Skin, hairfollicel and sebaceous glands



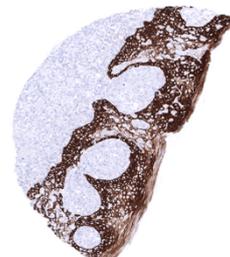
Stomach, corpus



Thymus - All epithelial cells and corpuscles of Hassalls of the thymus stain KRT14 positive



Tonsil - Squamous epithelium of the tonsil surface shows strong cytokeratin 14 immunostaining of all cell layers. Lymphocytes remain negative



Tonsil, surface epithelium - Squamous epithelium of the tonsil surface shows strong cytokeratin 14 immunostaining of all cell layers



Urinary bladder, urothelium - KRT14 is absent in urothelium