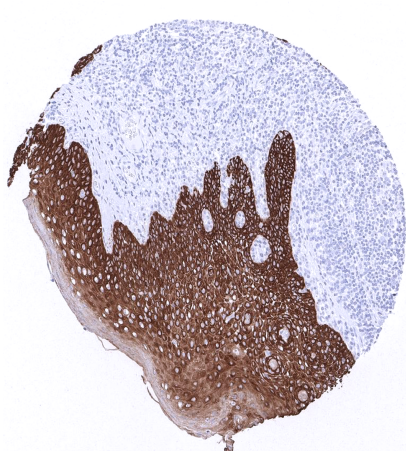


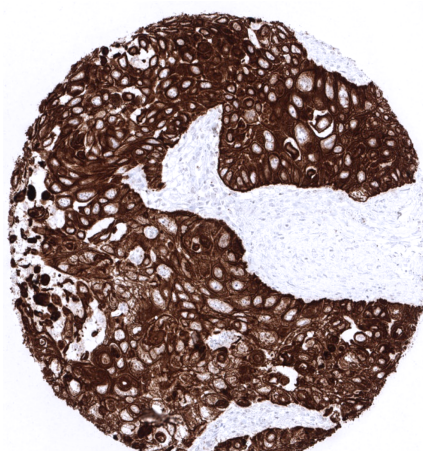
Anti-Cytokeratin 5 Antibody MSVA-605M / Recombinant Mouse monoclonal

Human SwissProt	P13647
Human Gene Symbol	KRT5
Synonyms	58kDa Cytokeratin; CK5; Cytokeratin-5; DDD1; Epidermolysis Bullosa Simplex 2 (EBS2); Keratin 5; Keratin, Type II Cytoskeletal 5; Keratin-5; KRT5; Type-II Cytoskeletal 5; Type-II keratin Kb5
Specificity	Cytokeratin 5
Immunogen	Recombinant human Cytokeratin 5 protein fragment
Isotype	Mouse / IgG1, kappa
Species Reactivity	Human
Localization	Cytoplasmic

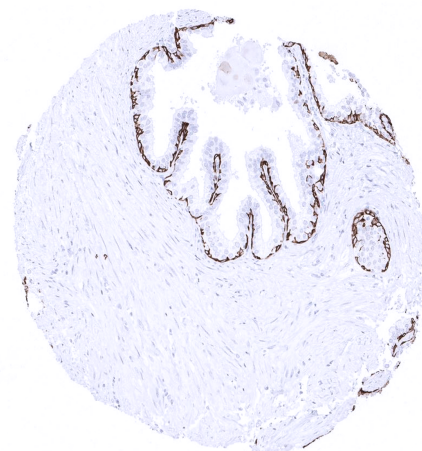
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Tris Buffer, pH 7,3 – 7,7 with 0.05% BSA & <0.1% azide.
Positive Control	A moderate to strong cytoplasmic KRT5 staining should be seen in virtually all squamous epithelial cells in the tonsil. A strong cytoplasmic staining should be present in the majority of basal cells of prostate glands.
Negative Control	Kidney cortex should not show any KRT5 staining. Lymphatic cells should not show any KRT5 positivity.



Squamous epithelium of the tonsil surface shows strong cytokeratin 5 immunostaining of all cell layers.



Strong KRT5 immunostaining in a squamous cell carcinoma of the lung.



Basal cells of the prostatic glands show strong KRT5 immunostaining.

Biology

Cytokeratin 5 (CK5), also termed keratin 5 (KRT5) is part of the cytoskeletal scaffold within epithelial cells. Together with its partner protein keratin 14, KRT5 makes up for up to 25% of total cell protein in epidermal basal cells. KRT5 is expressed in all keratinized and non-keratinized squamous epithelia with sometimes stronger staining intensity in the basal than in the superficial cell layers. KRT5 positivity is also seen in sebaceous glands and hair follicles as well as in all epithelial cells and Corpuscles of Hassall's of the thymus and tonsil crypts. KRT5 is expressed in basal cells of the prostate, seminal vesicle, epididymis, respiratory epithelium and of the endocervix (not all glands), the basal cell layer of urothelium, myoepithelial cells of the breast, myoepithelial cells and basal cells of excretory ducts of salivary and bronchial glands as well as in amnion and chorion cells of the placenta. KRT5 immunostaining is absent in lung, liver, pancreas, testis, kidney, gastrointestinal epithelial cells, Brunner glands, fallopian tube, placenta, adrenal gland, parathyroid gland, brain, adeno- and neurohypophysis, spleen, lymph node, all hematopoietic cell types, all mesenchymal tissues. KRT5 expression is seen in almost all squamous cell carcinomas irrespective of their origin and differentiation. KRT5 is also seen in almost all thymic epithelial tumors, >80% of epitheloid type malignant mesothelioma, 30-50% of urothelial carcinomas of the urinary bladder, 20-30% of pancreatic adenocarcinomas, 10-20% of cholangiocarcinomas of the liver, and in other cancers. Expression of KRT5 (and 14) in cancer is indicating basal-like subtype which is linked to poor prognosis in several cancer types including breast cancer.

Potential Research Applications

Visualization of basal cells and myoepithelial cells in multicolor IHC approaches.
-The potential diagnostic utility of KRT5 expression analysis (as compared to KRT5/6 analysis) needs to be investigated.
-The clinical significance of KRT5 expression needs to be evaluated in tumor types containing significant subgroups of KRT5 positive and negative tumors.

Protocol Suggestions

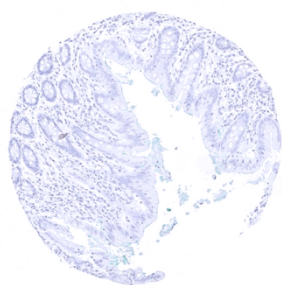
Dilution: 1:150, pH 9,0 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

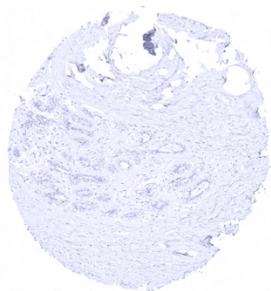
This antibody is available for **research use only** and is not approved for use in diagnostics.
Not for resale without express authorization.

Warranty

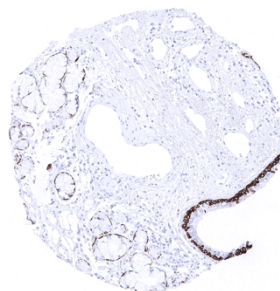
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



Appendix, mucosa



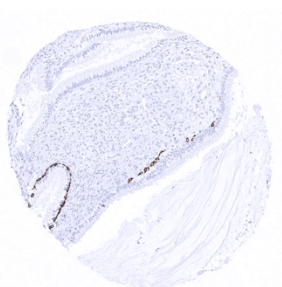
Breast - KRT5 staining can be very weak in myoepithelial cells of the breast



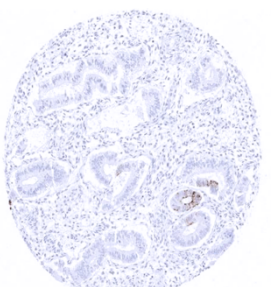
Bronchus, mucosa - Cytokeratin 5 is expressed in basal cells of respiratory epithelium as well as in myoepithelial cells of bronchial glands



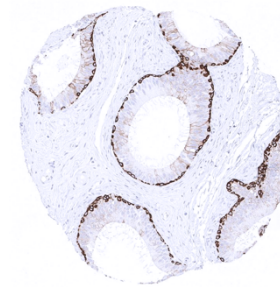
Ektocervix - KRT5 staining is usually seen in all layers of non-keratinizing squamous epithelium, but superficial layers stain sometimes slightly weaker



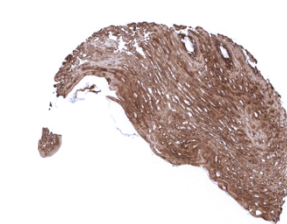
Endocervix - Some basal type cells can show KRT5 staining in endocervical glands



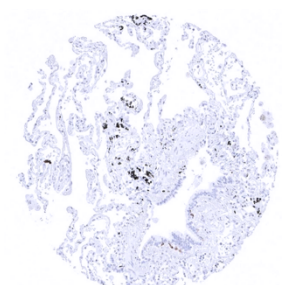
Endometrium, proliferation - Few endometrial epithelial cells (not all glands only in a few samples) can show KRT5 immunostaining



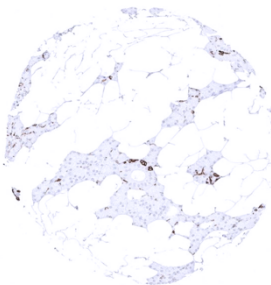
Epididymis - Basal cells of the epididymis show strong and columnar cells weak KRT5 immunostaining



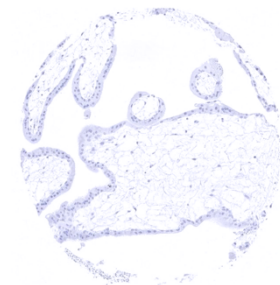
Esophagus, squamous epithelium



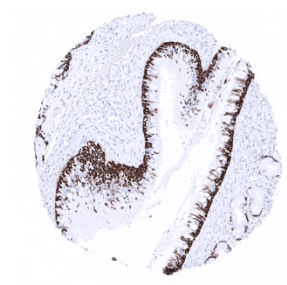
Lung



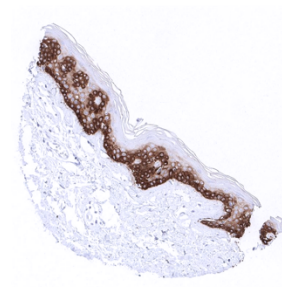
Parotid gland - Cytokeratin 5 is expressed in myoepithelial cells and basal cells of excretion ducts of salivary glands



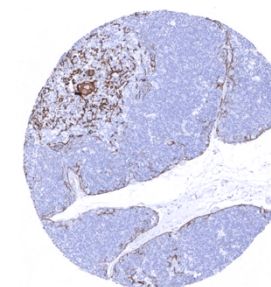
Placenta, early



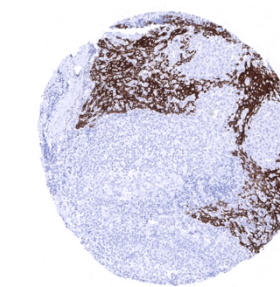
Sinus paranasales - Cytokeratin 5 is expressed in basal cells of respiratory epithelium as well as in myoepithelial cells of associated glands



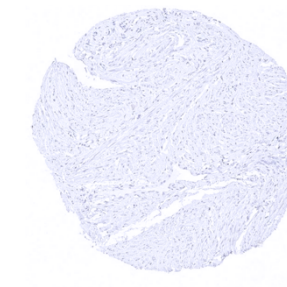
Skin - In the skin, CK5 staining predominantly occurs in the basal 50% of the epidermis, while the upper half stains weaker or can be completely negative



Thymus - All epithelial cells and Corpuscles of Hassall's of the thymus stain KRT5 positive



Tonsil - All epithelial cells of tonsil crypts stain KRT5 positive



Uterus, myometrium