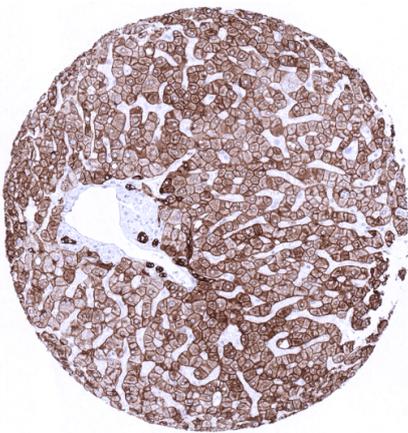


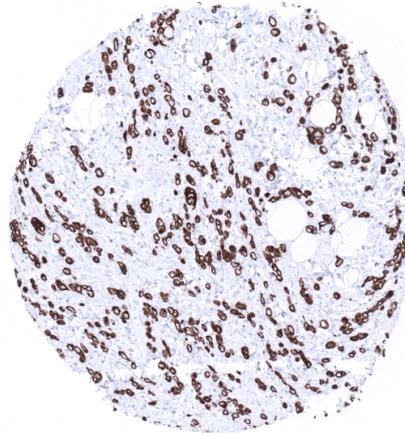
Anti-pan Cytokeratin Antibody MSVA-000R / Recombinant Rabbit monoclonal

Human SwissProt	Q7Z794 ; Q01546
Human Gene Symbol	KRT77 & KRT76
Synonyms	K1B; KRT1B; Keratin, type II cytoskeletal 1b; K77; CK-1B; Keratin 1B; Keratin-77; Cytokeratin-1B; Type-II Keratin Kb39
Specificity	Cytokeratin pan
Immunogen	Human epidermal keratin
Isotype	Rabbit / IgG,
Species Reactivity	Human
Localization	Cytoplasmic

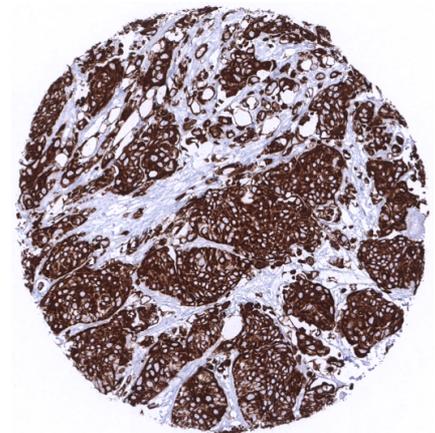
Storage & Stability	Antibody with azide - store at 2 to 8°C. Antibody without azide - store at -20 to -80°C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody in Tris pH 7,3-7,7 with 1% BSA, <0,1% NaN ₃ .
Positive Control	Liver tissue: A strong cytoplasmic staining of all bile ductal epithelial cells and an at least moderate cytoplasmic staining reaction with membrane accentuation of the majority of hepatocytes should be seen.
Negative Control	Lymphocytes in tonsil and lymph nodes. However, interstitial reticulum cells with dendritic/reticular pattern show a weak to moderate fibrillar staining reaction.



Normal liver with strong CKpan staining in small bile ducts and moderate staining in hepatocytes.



Diffuse type gastric adenocarcinoma with strong CKpan staining of all tumor cells.



Muscle-invasive urothelial carcinoma of the urinary bladder with strong CKpan staining of tumor cells.

Biology

"Pan-cytokeratin" is an antibody cocktail that contains most known cytokeratins and thus binds to almost all human epithelial and mesothelial cells. Specifically, the pan-cytokeratin antibody MSVA-xxx stains virtually all normal epithelial and mesothelial cells. The most significant exception is the adrenal cortex, where only a fraction of cells, typically arranged in groups, fascicles or sheets, stain weakly to moderately positive. A somewhat lower, but still moderate to strong staining intensity than in most other epithelial cells is seen in hepatocytes, Langerhans islets in the pancreas, alveolar cells of the lung, and corpus luteum cells in the ovary. In lymph nodes, tonsil, spleen, and thymus delicate fibrillar staining caused by fibroblastic reticulum cells is regularly seen, mainly in the interfollicular area. Spindle shaped myofibroblasts can occur in all organs, especially in case of degenerative or chronic inflammatory conditions. They for example occur in the media of the aorta, muscular wall of the gallbladder, placental stroma, or in the ovary in the vicinity of a corpus luteum. Groups of spindle shaped pan-cytokeratin positive cells were also found in the normal myometrium. Pan-cytokeratin immunostaining was absent in the testis, endothelial cells, the heart, striated muscle, muscular wall of the appendix, esophagus, stomach, ileum, colon descendens, kidney pelvis and urinary bladder, corpus spongiosum of the penis, ovarian stroma, fat, testis, neurohypophysis, cerebellum and cerebrum. Of note, some staining of pigments in liver and brain was also observed and considered non-specific.

Pan-cytokeratin cocktails are used in diagnostic immunohistochemistry for securing the epithelial nature of cells with equivocal morphology and visualization of cancer cells that are difficult to see in routine stains in pathology.

Potential Research Applications

-In suitable tissues CKpan can be used for the distinction of cancerous from non-cancerous cells and can thus be employed in various experimental multicolor immunofluorescence approaches (For example: automated assessment of the Ki67 labeling index in cancer cells).

Protocol Suggestions.

Dilution 1: 150 ; pH 9 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining).

Suggested manual protocol: heat-induced antigen retrieval for 5 minutes in an autoclave at 121°C in pH 9,0 buffer. Apply MSVA-000R at 37°C for 60 minutes at a dilution of 1:150.

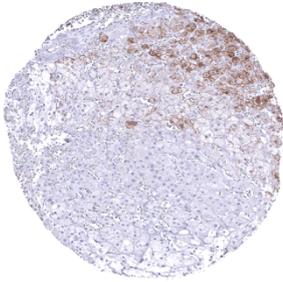
Limitations

This antibody is available for **research use only** and is not approved for use in diagnostics.

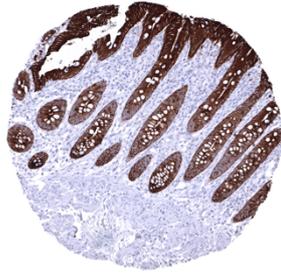
Not for resale without express authorization.

Warranty

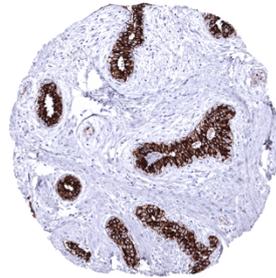
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



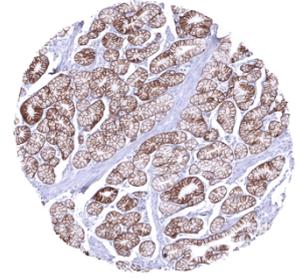
Adrenal gland - In the adrenal gland, only a fraction of cortical cells, typically arranged in groups, fascicles or sheets, show weak to moderate Ckpan immunostaining



Appendix, mucosa



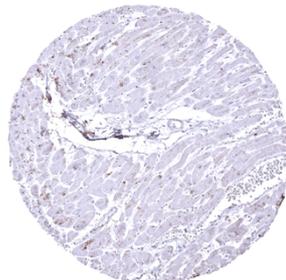
Duodenum, mucosa



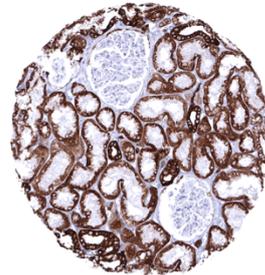
Duodenum, Brunner gland



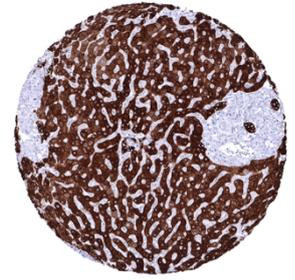
Epididymis



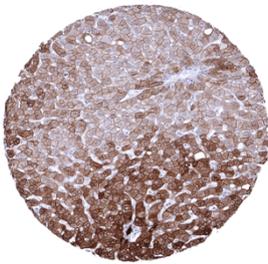
Heart - Ckpan negative heart muscle containing lipofuscin pigment



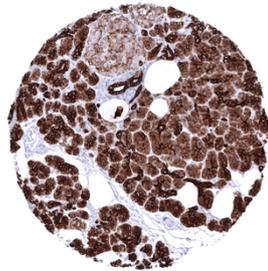
Kidney, cortex



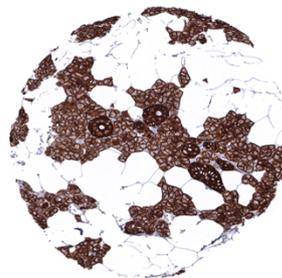
Liver - In the liver, a strong cytoplasmic staining of all bile ductal epithelial cells and an at least moderate, predominantly membranous immunostaining of hepatocytes is seen



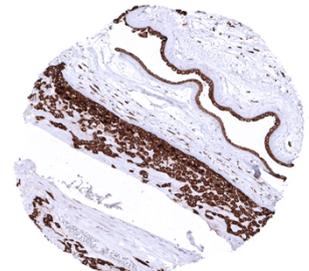
Liver - Liver The Ckpan immunostaining pattern of hepatocytes can show a zonal variability



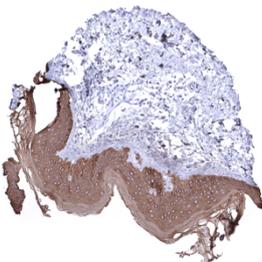
Pancreas - In the pancreas, the intensity of Ckpan immunostaining decreases from intercalated and excretory ducts to acinar cells and is even lower in islet cells



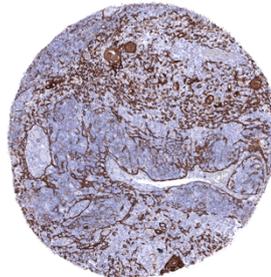
Parotid gland - In the parotid gland, the intensity of Ckpan immunostaining is highest in excretory ducts



Placenta, mature, amnion and chorion



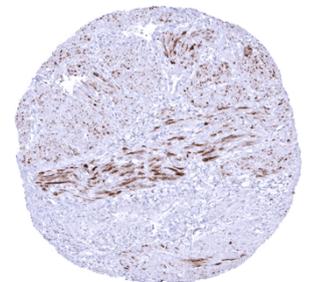
Skin



Thymus



Tonsil, surface epithelium



Uterus, myometrium - In the uterus, bundles of smooth muscle cells show weak to moderate Ckpan immunostaining