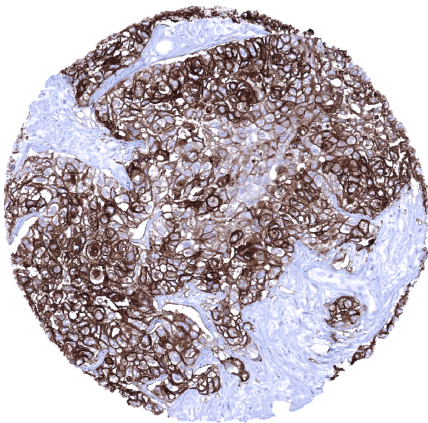


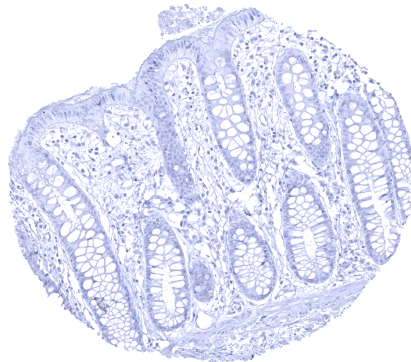
Anti-Uroplakin 1A Antibody MSVA-735M / Mouse Monoclonal

Human SwissProt	O00322
Human Gene Symbol	UPK1A
Synonyms	UP1A; UPIA; UPKA; TSPAN21
Specificity	Uroplakin 1A
Immunogen	Recombinant fragment of human UPK1A protein
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Cell Surface

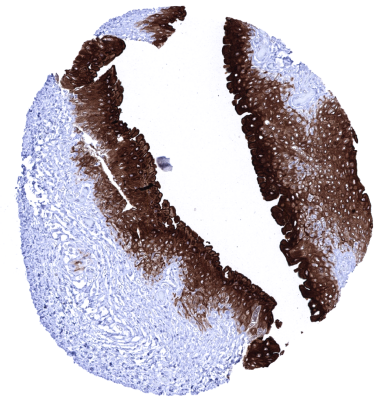
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Urinary bladder: A strong membranous and cytoplasmic Upk1a immunostaining should be seen in the urothelium (the staining can be limited to the top 1/3 or 2/3 of the urothelium).
Negative Control	Colon: Upk1a immunostaining should be absent in all cells of the colon mucosa.



Invasive urothelial carcinoma of the kidney pelvis with strong Upk1a positivity



Rectum, mucosa - Complete absence of Upk1A immunostaining in rectal mucosa



Urinary bladder, urothelium - Strong Upk1A immunostaining of the urothelium

Biology

The Uroplakin 1A (Upk1a) protein is coded by the UPK1b gene located at 19q13.12. Upk1a is one out of 5 known uroplakin (Upk) protein particles that cooperatively form apical asymmetrical unit membrane (AUM) plaques which play an important role in the stabilization and strengthening of epithelial cells that line the bladder. These AUM plaques enable the inner bladder membrane to stretch and prevent urothelial cells from rupturing during bladder distension. Upks are assembled in the endoplasmic reticulum (ER), where they heterodimerize prior to escaping the ER. Upk1a heterodimerizes with Upk2 and Upk1b heterodimerizes with Upk3. Upk heterodimers subsequently form heterotetramers which then combine as concentric hexameric rings that are packaged into vesicles and moved to the cell surface. AUMs and Upk proteins may also have a role in mediating membrane permeability and signal transduction events that are involved in the regulation of cell development, activation, growth, and motility. In normal tissues, the strongest Upk1a staining is seen in the urothelium where staining is strongest in the top third including umbrella cells while the basal cell layers are Upk1a negative. A markedly weaker staining can also be seen in some cell layers (middle third) of squamous epithelia of all kinds (not in all samples). Among tumors, a positive Upk1a immunostaining is most seen in urothelial carcinomas. Upk1a positivity can also occur in squamous cell carcinomas and – rarely – in other cancers.

Potential Research Applications

-The prevalence and clinical significance of Upk1a expression in cancer is unknown.

Protocol Suggestions

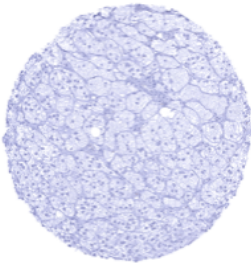
Dilution: 1:150. pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

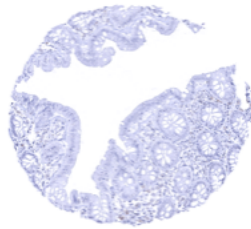
This antibody is available for **research use only** and is not approved for use in diagnostics. Not for resale without express authorization.

Warranty

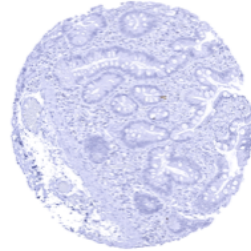
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



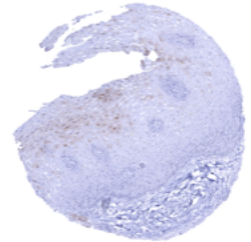
Adrenal gland



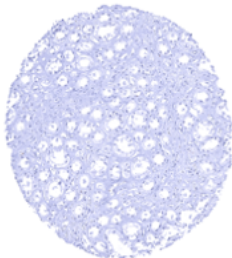
Colon descendens, mucosa



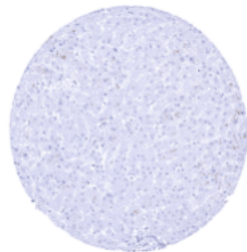
Duodenum, mucosa



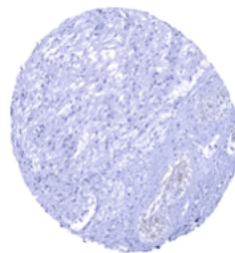
Esophagus, squamous epithelium - Weak Upk1A staining in distinct cell layers (middle third) of the squamous epithelium



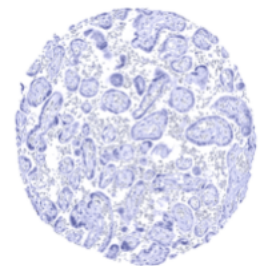
Kidney, medulla



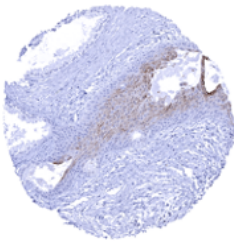
Liver



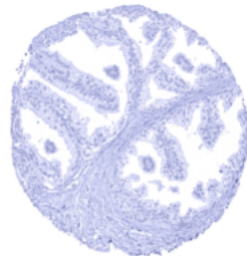
Pituitary, posterior lobe



Placenta, mature



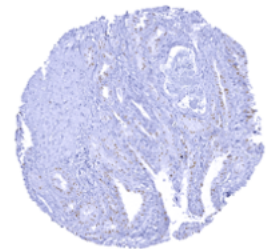
Prostate - Weak to moderate Upk1A staining in a squamous metaplasia of prostatic epithelial cells



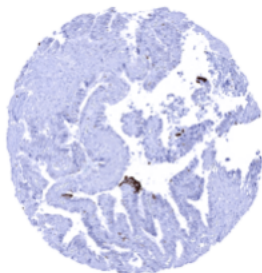
Prostate



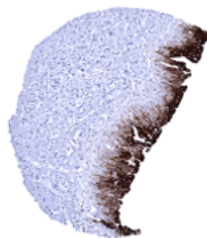
Rectum, mucosa - Complete absence of Upk1A immunostaining



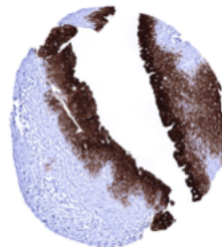
Seminal vesicle - Strong Upk1A immunostaining of few epithelial cells in the seminal vesicle (perhaps representing urothelium)



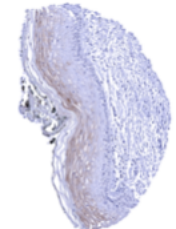
Seminal vesicle



Urinary bladder, urothelium - Strong Upk1A immunostaining of the top 2/3 of the urothelium. The basal cell layers do not show staining



Urinary bladder, urothelium - Strong Upk1A immunostaining of the urothelium. The staining intensity decreases to some extent toward the basal cell layers



Uterus, ectocervix - Weak to moderate Upk1A staining in distinct cell layers (middle third) of the squamous epithelium