MS Validated Antibodies

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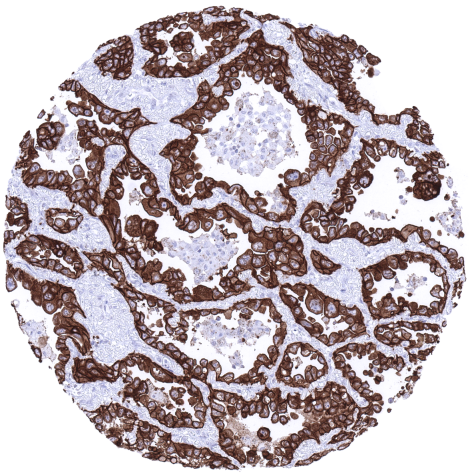
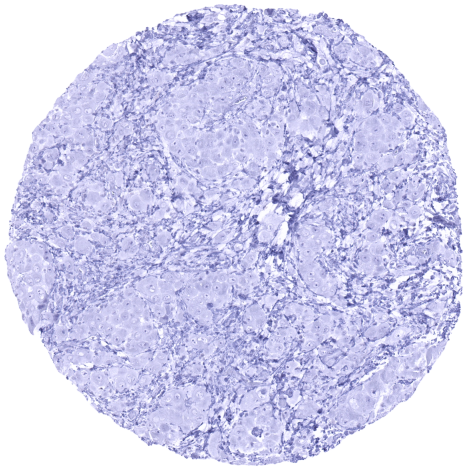
Anti-EpCam Antibody
MSVA-326R / Recombinant Rabbit monoclonal

Human SwissProt	P16422
Human Gene Symbol	TACSTD1
Synonyms	Adenocarcinoma-associated Antigen; Cell Surface Glycoprotein Trop-1; EGP2; EGP314; EGP40; Epithelial Cell Adhesion Molecule; Epithelial Glycoprotein 314; ESA; KSA; TACD1; TROP1; Tumor-associated Calcium Signal Transducer 1 (TACSTD1); ECS-1; Epidermal Surface Antigen 1; ESA1; FLOT2; Flotillin-2; Membrane Component, Chromosome 17, Surface Marker-1 (M17S1); REG-1; Reggie-1; Reggie-2
Specificity	Ep-Cam
Immunogen	Recombinant fragment of human TACSTD1 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cell Surface & Cytoplasmic

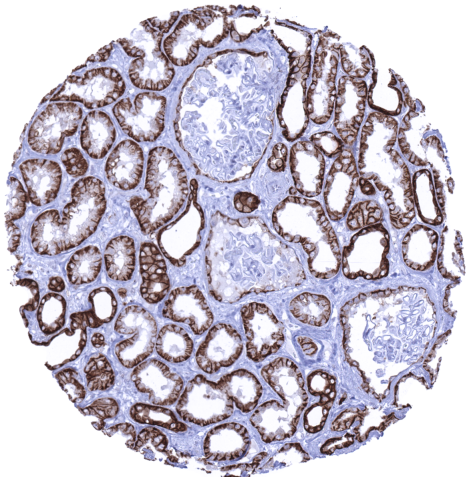
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	kidney: In kidney, distal tubule cells must show a strong predominantly membranous staining, while at a least moderate predominantly basolateral staining reaction must be seen in the majority of proximal tubules cells and in scattered epithelial cells lining the Bowman capsule.
Negative Control	Tonsil: EpCam staining should be absent in lymphocytes or smooth muscle cells of the vessels.



Strong EPCAM staining in an adenocarcinoma of the lung.



EPCAM immunostaining is lacking in an epitheloid malignant mesothelioma.



In normal kidney, EpCAM staining is strong in the distal tubules and moderate in the proximal tubulus (predominantly basolateral) and in epithelial cells lining the Bowman capsule.

Biology

Epithelial cell adhesion molecule (EpCAM) is a glycosylated, transmembrane glycoprotein which was initially considered a cell adhesion molecule but has only weak cell-adhesive properties, It is involved in cell signaling and may thus play a role in migration, proliferation, differentiation, and epithelial-mesenchymal transformation. In normal tissues, EpCAM is expressed in the vast majority of epithelial cells. Exceptions include hepatocytes and to some extent distal tubuli of the kidney, squamous epithelia and adrenocortical cells. In squamous epithelia, EpCam is variably expressed. If present, EpCam is most strongly expressed in basal cell layers and expression can expand up to the upper third. Some squamous epithelia show few scattered EpCAM positive cells of upper layers. Normal mesothelial cells and hepatocytes are EpCAM negative, but may exhibit focal staining when undergoing reactive changes. Among tumors, EpCAM staining occurs in the majority of epithelial tumors. Tumors that are usually EpCAM negative include hepatocellular carcinoma and adrenocortical tumors. Tumors that are EpCAM negative in a large fraction of cases include squamous cell carcinomas and epitheloid mesotheliomas. Mesenchymal tumors and tumor components are almost always EpCAM negative.

Potential Research Applications

-Because of partly controversial data, the diagnostic utility of EpCam IHC should be investigated in a large cohort of tumors from different entities.
-Although the EpCam protein is known for a long time, its function is not completely understood.
-Multicolor immunohistochemistry could shed some light on EpCAM signaling effects.
-Whether or not EpCAM expression levels influence cancer prognosis is unclear.

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.

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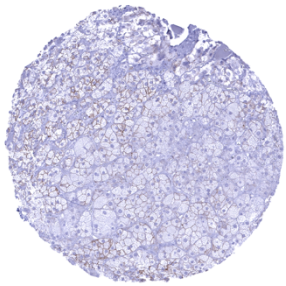
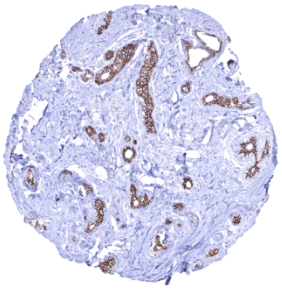
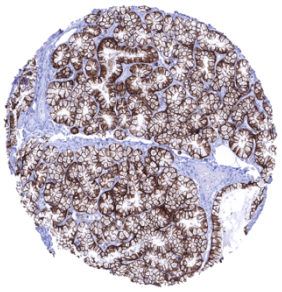


Adrenal gland - In the adrenal gland, a weak membranous staining of adrenocortical cells can be seen

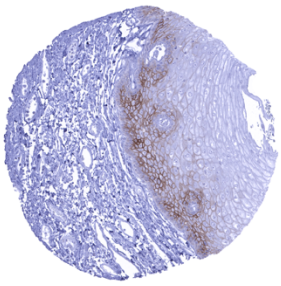
Appendix, mucosa



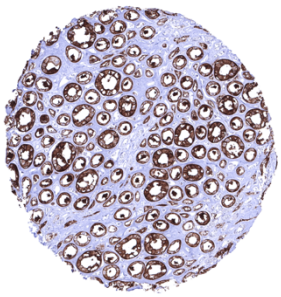
Breast - In the breast gland, luminal cells are strongly positive but basal/myoepithelial cells show much less or absent staining



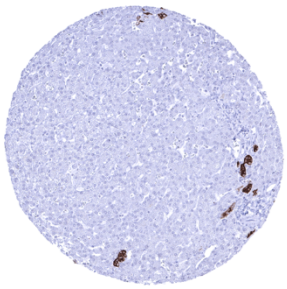
Duodenum, Brunner gland



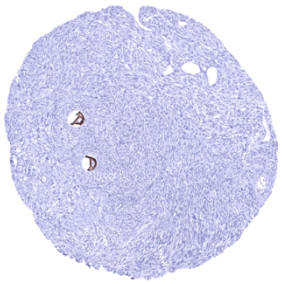
Esophagus, squamous epithelium - A weak to moderate EpCam immunostaining is seen in the suprabasal cell layers of esophageal squamous epithelium



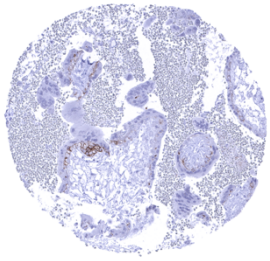
Kidney, medulla



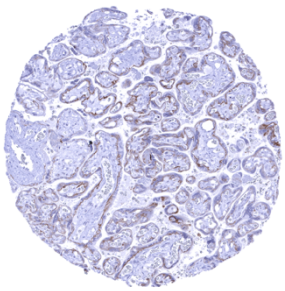
Liver - In the liver, hepatocytes are EpCAM negative but EpCAM is strongly expressed in epithelial cells of the bile ducts



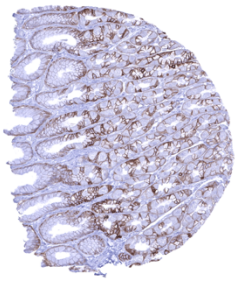
Ovary, stroma - A strong EpCAM immunostaining is seen in oocytes of the ovary



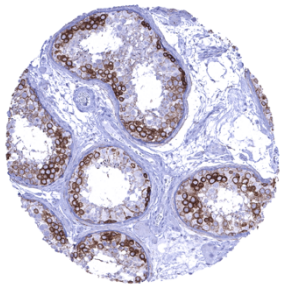
Placenta, first trimenon - In the first trimenon placenta only cytotrophoblast cells shows a weak to moderate EpCAM staining



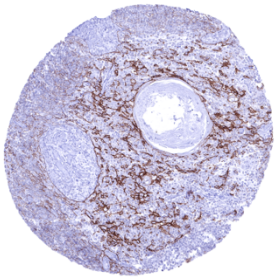
Placenta, mature - In the mature placenta, a weak membranous staining of the basal membrane of the trophoblast layer is occasionally seen



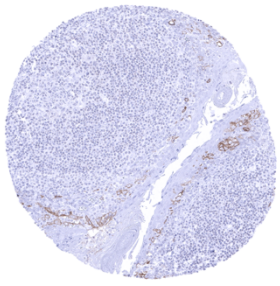
Stomach, corpus - EpCAM is strongly expressed in all epithelial cells of the stomach which show a weaker staining limited to the basolateral membranes



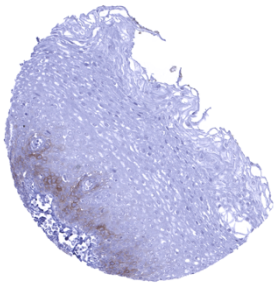
Testis - In the testis, spermatogonia and spermatocytes show strong EpCAM immunostaining but Sertoli and Leydig cells are negative



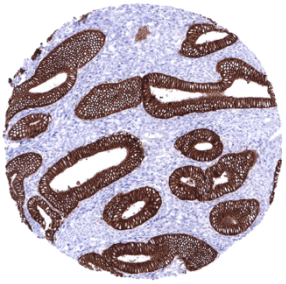
Thymus - Most thymus epithelial cells including corpuscles of Hassal's weak show a weak to moderate EpCAM positivity



Tonsil - A moderate EpCAM positivity is seen in a subset of squamous epithelial cells of the tonsil crypts



Tonsil, surface epithelium - A weak to moderate EpCam immunostaining is seen in the basal cell layers of squamous epithelium of the tonsil surface



Uterus, endometrium (proliferation)