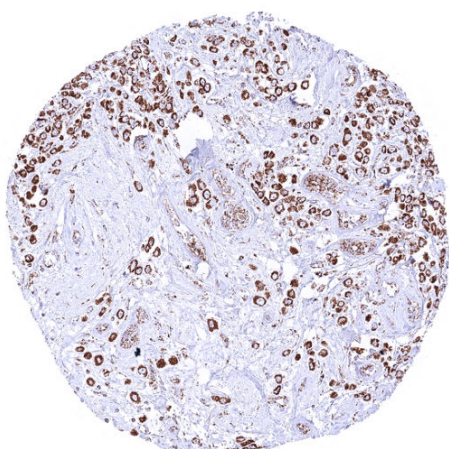


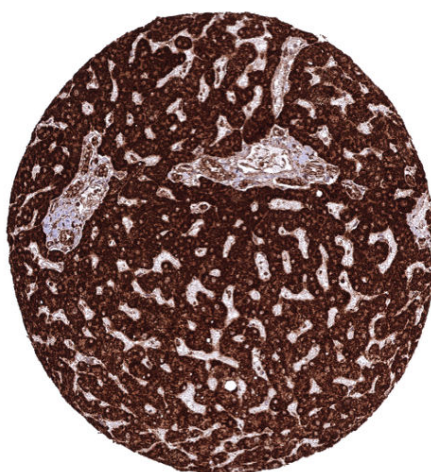
Anti- ATP5J Antibody HMV3971 / Recombinant Rabbit monoclonal

Human SwissProt	P18859
Human Gene Symbol	ATP5PF
Synonyms	ATP synthase peripheral stalk subunit F6, ATP5, ATP5A, ATP5J, ATPM, CF6, F6
Specificity	ATP5J
Immunogen	Recombinant human ATP5J fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Mitochondrion, Mitochondrion inner membrane

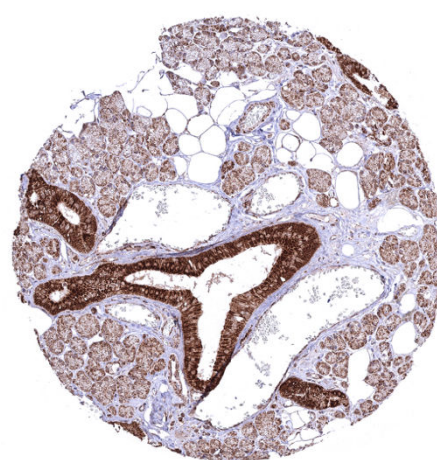
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Parotis: A strong ATP5J staining should be seen in excretory ducts while staining is only weak to moderate in serous glands.
Negative Control	Parotis: ATP5J staining should be only weak to moderate in serous glands while staining is strong in excretory ducts (Note: completely ATP5J negative normal tissues do not exist)



Invasive lobular breast cancer with strong cytoplasmic ATP5J staining of all tumor cells.



Liver tissue shows a particularly intense cytoplasmic ATP5J staining in hepatocytes.



Parotis with intense cytoplasmic ATP5J staining in excretory ducts while the staining is markedly weaker in other cell types.

Biology

ATP synthase-coupling factor 6, mitochondrial (ATP5J) also termed ATP synthase peripheral stalk subunit F6 or ATP5PF is coded by the ATP5PF gene located at chromosome 21q21.3. It is a component of the enzyme ATP synthase which is needed to produce the energy storage molecule adenosine triphosphate (ATP) from adenosine diphosphate (ADP) and phosphate. ATP5J is part of the peripheral stalk that links the two ATP synthetase subunits (F1 and FO) together. It has been proposed that its main function is structural as it holds the peripheral stalk stationary against the torque of the rotating central stalk (16045926). A direct functional role of ATP5J in cell proliferation, migration, and inflammation has also been suggested. The protein is ubiquitously expressed at high levels but cell types differ to some extent in its expression level. Also in cancer, ATP5J is always expressed at varying levels.

Potential Research Applications

- The role of ATP5J in disease is not fully understood
- The utility of ATP5J as a biomarker is not clear
- The utility of ATP5J measurement in cancer needs to be evaluated (it could be useful as a surrogate for the quantity of mitochondria or ATPase activity)

Protocol Suggestions

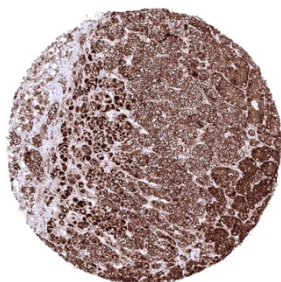
Dilution: 1:100-1:200; pH 7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

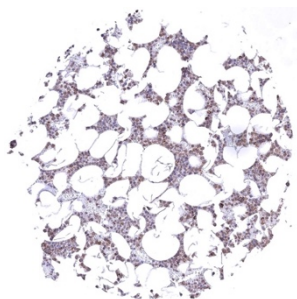
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

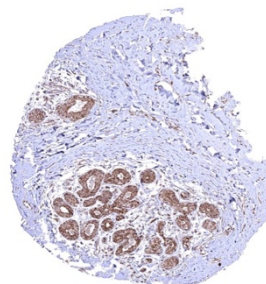
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



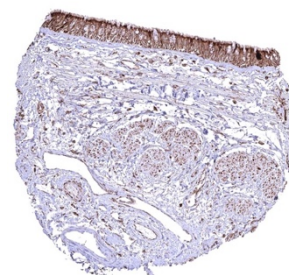
Adrenal gland – Cytoplasmic ATP5J staining occurs in all cell types. It is particularly strong in adrenocortical cells



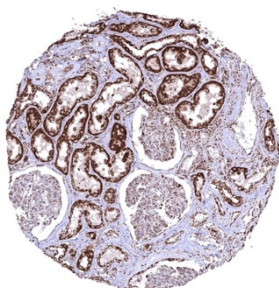
Bone marrow – Cytoplasmic ATP5J staining of variable intensity in all cell types.



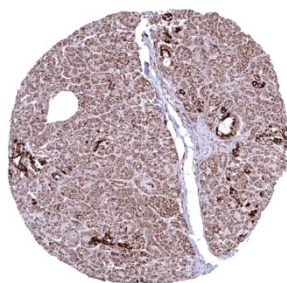
Breast



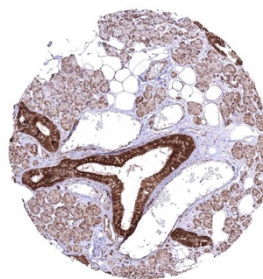
Bronchus, mucosa – Cytoplasmic ATP5J staining occurs in all cell types. A characteristic granular cytoplasmic staining is seen below the apical membranes.



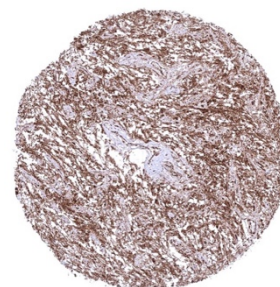
Kidney, cortex – Cytoplasmic ATP5J staining occurs in all cell types. It is intense in all tubuli, moderate in collecting ducts, and least intense in glomeruli.



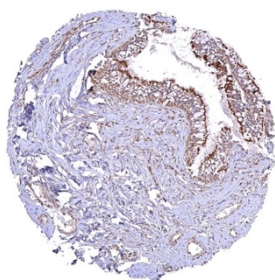
Pancreas – Distinct granular, perinuclear, cytoplasmic ATP5J staining in all cell types. Some cells with higher staining intensity may be related to the excretory system.



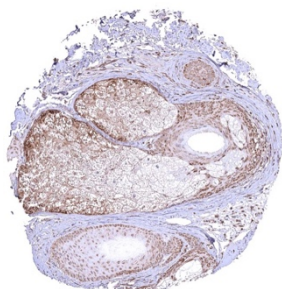
Parotid gland – Cytoplasmic ATP5J staining occurs in all cell types. It is very intense in excretory ducts but rather weak in glandular cells.



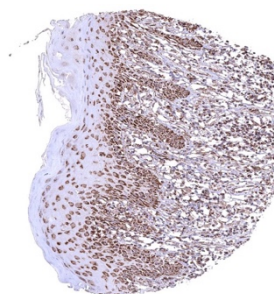
Pituitary gland, posterior lobe



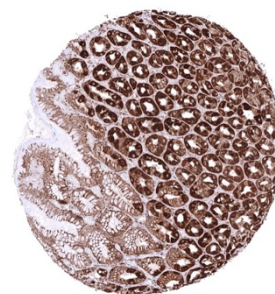
Sinus paranasales – Cytoplasmic ATP5J staining occurs in all cell types. A characteristic granular cytoplasmic staining is seen below the apical membranes.



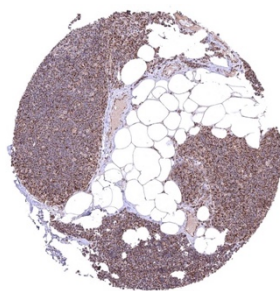
Skin, hairfollicel and sebaceous glands – Distinct cytoplasmic ATP5J staining of all cell types of hair follicles but staining is particularly weak in sebaceous glandular cells.



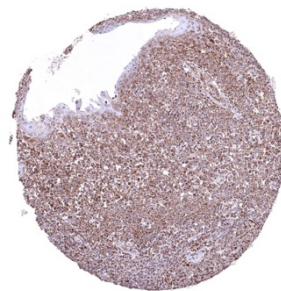
Skin



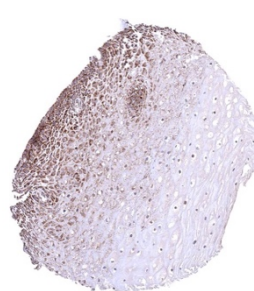
Stomach, corpus – Cytoplasmic ATP5J staining occurs in all cell types. It is most intense in parietal cells and least intense in superficial epithelial cells.



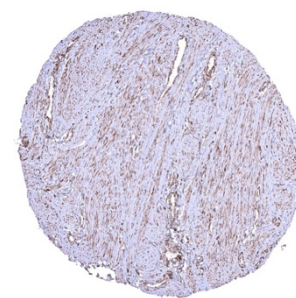
Thymus



Tonsil – Strong granular cytoplasmic ATP5J staining of all cell types. The staining is least intense in superficial cell layers of squamous epithelium.



Uterus, ectocervix – Distinct granular, perinuclear, cytoplasmic ATP5J staining in all cell types. The staining is least intense in superficial cell layers of non-keratinizing squamous epithelium.



Uterus, myometrium