

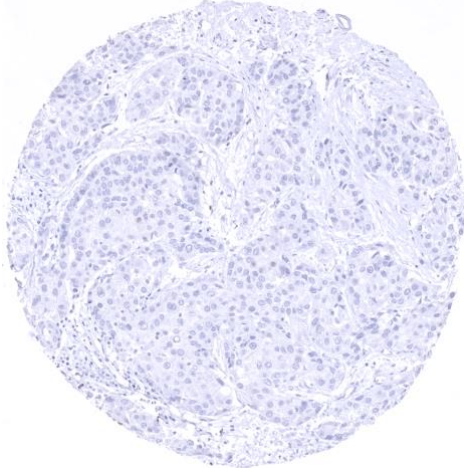
Anti-Arginase 1 Antibody MSVA-511R / Recombinant Rabbit monoclonal

Human SwissProt	P05089
Human Gene Symbol	ARG1
Synonyms	Arginase 1; ARG1; liver-type arginase; type I arginase
Specificity	Arginase 1
Immunogen	Recombinant human ARG1 protein
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Cytoplasmic

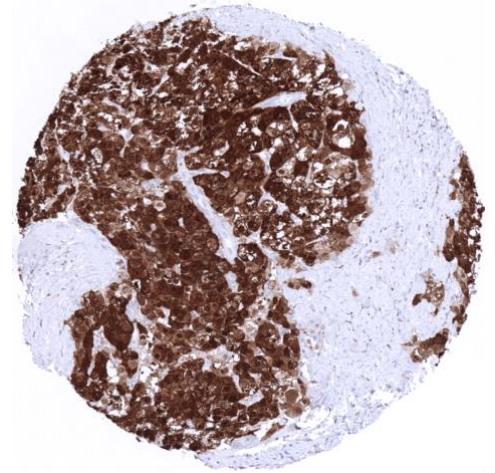
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	A strong staining should be seen in the liver. A moderate to strong positivity is expected in granulocytes, which are for example seen in the spleen.
Negative Control	Colon: Epithelial cells, smooth muscle and the vast majority of stroma cells should stain negative (A few granulocytes may stain).



Strong nuclear and cytoplasmic arginase-1 expression in all hepatocytes in a normal liver.



Complete absence of arginase-1 immunostaining in a cholangiocellular carcinoma of the liver.



Hepatocellular carcinoma showing strong nuclear and cytoplasmic arginase-1 positivity in all tumor cells.

Biology

Arginase-1 is coded by the ARG1 gene located at 6q23. Arginase-1 is an enzyme that catalyzes the conversion of arginine to ornithine and urea in the final step of the urea cycle. In normal tissues, hepatocytes show - by far - the strongest expression. Arginase-1 immunostaining is typically cytoplasmic and nuclear. Arginase-1 immunostaining can also be seen in granulocytes (moderate), a fraction of decidua cells (weak-to moderate), and in the granular layer of keratinizing squamous epithelium of the skin (moderate). Among tumors, arginase-1 is expressed in the vast majority of hepatocellular carcinomas but occurs only exceptionally in other tumors. A focal arginase positivity can occasionally be seen in specific cell layers of squamous cell carcinomas reflecting the granulosa cell layer of normal skin. Arginase-1 expression has been reported to occur in hepatoid carcinoma of the pancreas.

Applications

- Arginase-1 is a highly sensitive and specific marker for hepatocellular carcinoma and other tumors derived from hepatocytes.
- Distinction of primary liver carcinomas (mostly positive) from cholangiocellular carcinoma (negative) or metastases to the liver (negative)

Protocol Suggestions

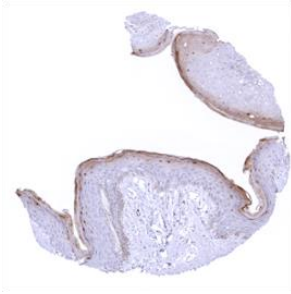
Dilution: 1:150. pH 7,8 is optimal. Freshly cut sections should be used (less than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

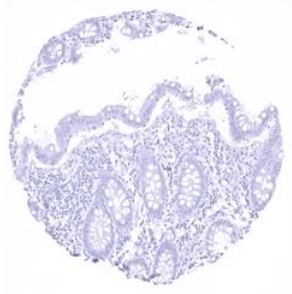
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

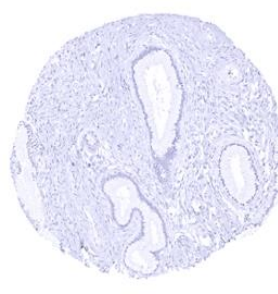
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product. Not for resale without express authorization.



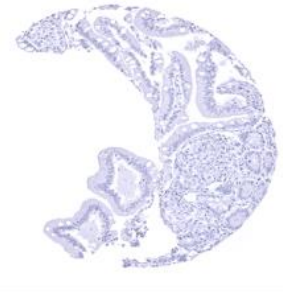
Anal canal, skin - In keratinizing squamous epithelium, a weak to moderate – sometimes even strong - nuclear and cytoplasmic arginase immunostaining is seen in the granular layer



Appendix, mucosa



Endocervix



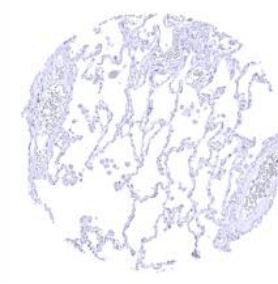
Ileum, mucosa



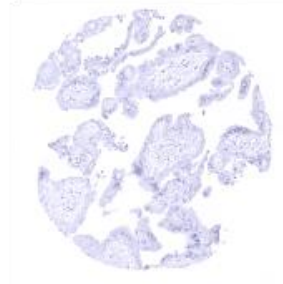
Liver - In normal tissues, the – by far – strongest arginase immunostaining is seen in the liver



Liver - Among all normal tissues, the strongest arginase immunostaining is found in the liver



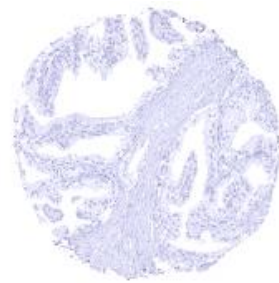
Lung



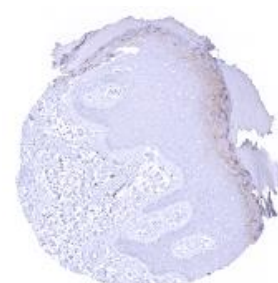
Placenta, early



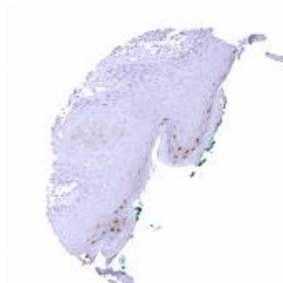
Placenta, mature - In the pregnant uterus, a fraction of decidua cells can show a weak to moderate, cytoplasmic arginase-1 immunostaining



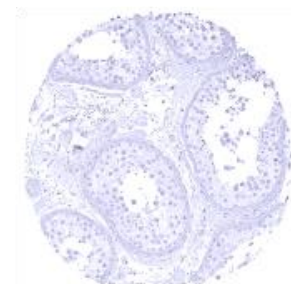
Prostate



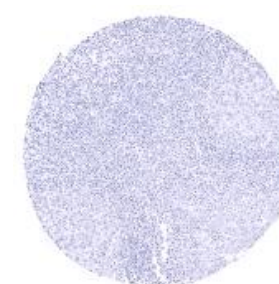
Skin - In keratinizing squamous epithelium, a weak to moderate nuclear and cytoplasmic arginase-1 positivity is seen in the granular layer



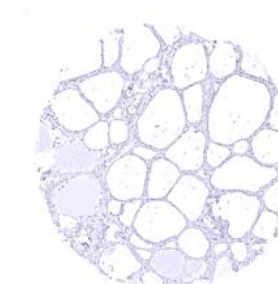
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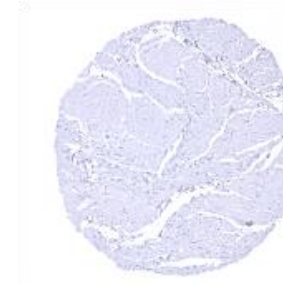
Testis



Tonsil



Tyroid gland



Urinary bladder, muscular wall