IONPATH

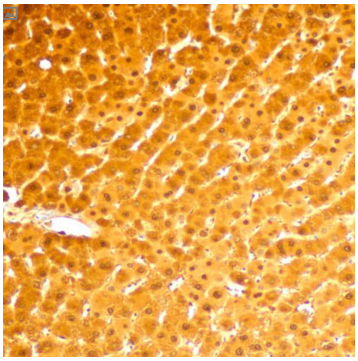
TECHNICAL DATA SHEET

Arginase [EPR6672(B)] - 150Nd

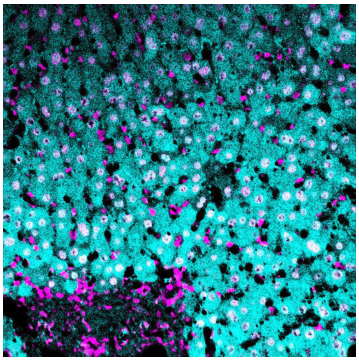
Catalog: 715001 **Clone:** EPR6672(B) **Isotype:** Rabbit IgG

Reactivity: Human* **Application:** MIBI-FFPE

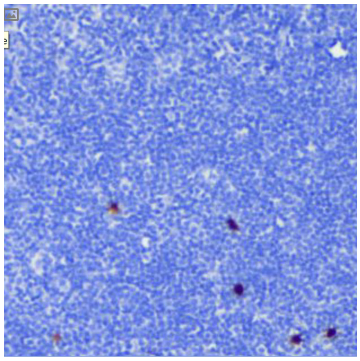
Storage: Supplied in antibody stabilizer with 0.05% sodium azide. Store at 4°C



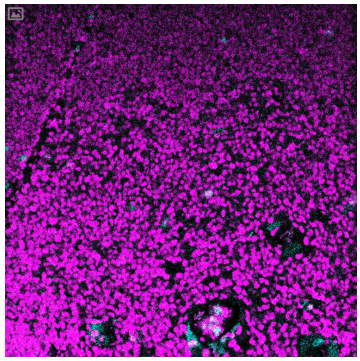
IHC: Arginase-1 antibody staining of FFPE human liver



MIBI: Arginase-1 antibody staining (cyan) of FFPE human liver, counterstained with Histone H3 (magenta)



IHC: Arginase-1 antibody staining of FFPE human thymus



MIBI: Arginase-1 antibody staining (cyan) of FFPE human thymus, counterstained with Histone H3 (magenta)

Background

Arginase-1 is expressed by liver cells, myeloid-derived suppressor cells (MDSCs), macrophages, and neutrophils. In mammals, there are three enzymes that metabolise arginine: two arginase isoforms (ARG1, ARG2) and inducible nitric oxide synthase (iNOS). Arginase-1 catalyzes the breakdown of L-arginine into L-ornithine and urea as the final step in the urea cycle. L-arginine is a necessary metabolite for T cell receptor signaling and T cell proliferation. Arginase is induced by inflammation. In cancer, MDSCs within the tumor microenvironment (TME) produce arginase-1 resulting in low levels of available L-arginine within the TME leading to attenuated T cell responsiveness.

Validation

Each lot of conjugated antibody is quality control tested by staining tissue following the MIBI Staining Protocol optimized for the applicable tissue format with subsequent MIBIscope analysis using the appropriate positive and negative tissue field of views. These results are pathologist verified.

Recommended Usage

Human FFPE: 1:100 dilution. For optimal results, the antibody should be titrated for each desired application.

References

Rodríguez, P.C., Ochoa A.C. Arginine regulation by myeloid derived suppressor cells and tolerance in cancer: mechanisms and therapeutic perspectives. *Immunol Rev*. 2008; **222**:180-91.

McGaha T.L. et al. Amino acid catabolism: a pivotal regulator of innate and adaptive immunity. *Immunol Rev*. 2012; **249**(1):135-57.

* Conjugate tested on human tissue.

Technical Support
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