Rabbit anti-human Arginase-1 (ARG-1) Monoclonal Antibody (Clone EP261)

REFERENCES AND PRESENTATIONS[1]

- **ready-to-use (ml)**
  MAD-000667QD–3
  MAD-000667QD–7
  MAD-000667QD–12
- **MD-Stainer presentations**[2]
  MAD-000667QD-3/V
  MAD-000667QD/V
- **concentrated**
  MAD-000667Q - 1:50 recommended dilution

COMPOSITION
Anti-human ARG-1 rabbit monoclonal antibody purified from serum and prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide
INTENDED USE IVD: Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting
CLONE: EP261[3]
Ig ISOTYPE: rabbit IgG
IMMUNOGEN: A synthetic peptide corresponding to residues in human ARG-1 protein.
SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species
DESCRIPTION AND APPLICATIONS: Arginase is a manganese metalloenzyme that catalyzes the hydrolysis of arginine to generate ornithine and urea. Arginase I and II are isoenzymes which differ in subcellular localization, regulation, and possibly function. Arginase I is a cytosolic enzyme, which is expressed mainly in the liver as part of the urea cycle, whereas arginase II is a mitochondrial protein found in a variety of tissues.
Antibody to ARG-1 labels hepatocytes in normal tissues and granulocytes in peripheral blood. ARG-1 is a sensitive and specific marker for identification of hepatocellular carcinoma.

This antibody is very useful in distinguishing between: 1) liver metastases of various adenocarcinomas and hepatocellular carcinoma (HCC), which can be a real diagnostic challenge, especially in small biopsies or material from fine needle aspiration (FNA) and 2) the distinction between different histological variants of HCC and cholangiocarcinoma. Specifically, the ARG-1 antibody is key in the diagnosis of scirrhous hepatocellular carcinoma, where specific markers for adenocarcinomas are generally positive while HepPar-1 in some cases it may be negative. In addition, several studies have shown that ARG-1 antibody is more sensitive than HepPar-1 for immunohistochemical diagnosis of hepatocellular carcinoma while the second is usually negative in poorly differentiated hepatocellular carcinomas and can be positive in adenocarcinomas of pancreatic, gastric, colic origin or even cholangiocarcinoma. However, isolated cases of pancreatic adenocarcinomas and cholangiocarcinomas presented focal staining against ARG-1. In this line, it should be considered that the ARG-1 antibody does not allow differential diagnosis between benign, dysplastic and malignant hepatocyte lesions.

IHC POSITIVE CONTROL: Liver
VISUALIZATION: Cell cytoplasm and nuclei

IHC RECOMMENDED PROCEDURE:
- 4µm thick section should be taken on charged slides; dry overnight at 60ºC
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Master Diagnóstica EDTA buffer pH8[4] for 20 min at 95ºC. Upon completion rinse with 3-5 changes of distilled or deionised water followed by cooling at RT for 20 min
- Endogenous peroxidase block - Blocking for 10 minutes at room temperature using peroxidase solution (ref. MAD-021540Q-125)
- Primary antibody: incubate for 20 minutes [The antibody dilution (when concentrated) and protocol may vary depending on the specimen preparation and specific application. Optimal conditions should be determined by the individual laboratory]
- For detection use Master Polymer Plus Detection System (HRP) (DAB included; ref. MAD-000237QK)
- Counterstaining with haematoxylin and final mounting of the slide

[1] These references are for presentation in vials of Low Density Polyethylene (LDPE) dropper. In case the products are used in automated stainers, a special reference is assigned as follows:
- / L: Cylindrical screw-cap vials (QD-3 / L, QD-7 / L, QD-12 / L).
- / N: Polygonal screw-cap vials (QD-3 / N, QD-7 / N, QD-12 / N).
For different presentations (references / volumes) please contact the supplier.

[2] For Technical specifications for MD-Stainer, please contact your distributor.

[3] ARG-1 clone EP261 is manufactured using Epitomics's RabMAb® technology under U.S. Patent Nos. 5,675,063 and 7,402,409

[4] Ref: MAD-004072R/D

STORAGE AND STABILITY: up to 18 months; stored at 2-8ºC. Do not freeze.

WARNINGS AND PRECAUTIONS:

1. Avoid contact of reagents with eyes and mucous membranes. If reagents come into contact with sensitive areas, wash with copious amounts of water.
2. This product is harmful if swallowed.
3. Consult local or state authorities with regard to recommended method of disposal.
4. Avoid microbial contamination of reagents.

SAFETY RECOMMENDATIONS

This product is intended for laboratory professional use only. The product is NOT intended to be used as a drug or for domestic purposes. The current version of the Safety Data Sheet for this product can be downloaded by searching the reference number at www.vitro.bio or can be requested at regulatory.md@vitro.bio.

BIBLIOGRAPHY

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