

Carbonic Anhydrase 9 (EP161)

Rabbit anti-human Carbonic Anhydrase 9 Monoclonal Antibody (Clone EP161)

REFERENCES AND PRESENTATIONS¹

- **ready-to-use** (manual or LabVision AutoStainer)
MAD-000652QD-3
MAD-000652QD-7
MAD-000652QD-12
- **Ready-to-use (MD-Stainer)²**
MAD-000652QD-3/V
MAD-000652QD/V
- **concentrated**
MAD-000652Q - 1:50 recommended dilution

COMPOSITION:

Anti-human Carbonic Anhydrase 9 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  Immunohistochemistry (IHC) on paraffin embedded tissues. Not tested on frozen tissues or Western-Blotting

CLONE: EP161³

Ig ISOTYPE: IgG

IMMUNOGEN: A synthetic peptide corresponding to residues in the extracellular domain in human Carbonic Anhydrase 9 was used as an immunogen.

SPECIES REACTIVITY: In vitro diagnostics in humans. Not tested in other species

DESCRIPTION AND APPLICATIONS:

Carbonic anhydrases (CAs) are a large family of zinc metalloenzymes that catalyze the reversible hydration of carbon dioxide. They participate in a variety of biological processes, including respiration, calcification, acid-base balance, bone resorption, and the formation of aqueous humor, cerebrospinal fluid, saliva, and gastric acid. They show extensive diversity in tissue distribution and subcellular localization.

Carbonic Anhydrase 9, a member of the carbonic anhydrase family, is thought to play a role in the regulation of cell proliferation in response to hypoxic

conditions and may be involved in oncogenesis and tumor progression.

Carbonic Anhydrase 9 (CA9) has a distinctive expression pattern in normal and cancer tissues. The most abundant expression of CA9 was found in normal mucosa of the stomach and gallbladder. Other normal tissues have lower or no expression. Relatively high levels of CA9 are expressed in carcinomas of the cervix, kidney, lung, breast and many other tumors. Most studies have shown that decreased CA9 levels are independently associated with poor survival. Low levels of CA9 maybe benefit more from adjuvant treatment than patients with high levels.

IHC POSITIVE CONTROL: Stomach for normal tissue and Renal cell carcinoma for abnormal tissue.

VISUALIZATION: Cell membrane

IHC RECOMMENDED PROCEDURE:

- 4µm thick section should be taken on charged slides; dry overnight at 60°C
- Deparaffinise, rehydrate and HIER (heat induced epitope retrieval) – boil tissue in the Pt Module using Vitro S.A EDTA buffer pH8⁴ for 20 min at 95°C. 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

STORAGE AND STABILITY:  Stored at 2-8°C. Do not freeze.  Once the packaging has been opened it can be stored until the expiration date of the reagent indicated on the label. If the reagent has been stored under other conditions to those indicated in this document, the user must first check its correct performance taking into account the product warranty is no longer valid.

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 Carbonic anhydrase 9 clone EP161 is manufactured using Epitomics's RabMAb® technology under U.S. Patent Nos. 5,675,063 and 7,402,409

⁴ Ref: MAD-004072R/D



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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@vitro.bio.

BIBLIOGRAPHY

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3. Ivanov S, Liao SY, Ivanova A, Danilkovitch-Miagkova A, Tarasova N, Weirich G, Merrill MJ, Proescholdt MA, Oldfield EH, Lee J, Zavada J, Waheed A, Sly W, Lerman MI, Stanbridge EJ. Expression of hypoxia-inducible cell-surface transmembrane carbonic anhydrases in human cancer. *Am J Pathol.* 2001 Mar;158(3):905-19
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5. Al-Ahmadie HA, Alden D, Fine SW, Gopalan A, Touijer KA, Russo P, Reuter VE, Tickoo SK. Role of immunohistochemistry in the evaluation of needle core biopsies in adult renal cortical tumors: an ex vivo study. *Am J Surg Pathol.* 2011;35:949-961
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novel antitumor target. *Biochim Biophys Acta.* 2010;1804:404-409

LABEL AND BOX SYMBOLS

Explanation of the symbols of the product label and box:

	Expiration date
	Temperature limit
	Manufacturer
	Sufficient content for <n> assays
	Catalog number
	Lot code
	Refer to the instructions of use
	Medical product for <i>in vitro</i> diagnosis.
	Material safety data sheet



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