

The background of the page is a photograph of a laboratory setting. A gloved hand is using a multi-channel pipette to transfer liquid into a 96-well plate. In the background, there is a rack of test tubes containing yellow liquid. The image is overlaid with a teal-colored banner on the left side containing text.

Oncogene Science CA IX ELISA

Carbonic Anhydrase IX (CA IX)

For Research Use Only. Not for use in diagnostic procedures.

Carbonic Anhydrase IX (CA IX)

→ Use

The Oncogene Science® CA IX ELISA is an enzyme-linked immunosorbent assay for the quantitative detection of the circulating form of the CA IX (Carbonic Anhydrase IX) protein in human serum and plasma. This test is for research use only (RUO) and is not for use in diagnostic procedures.

→ CA IX

The transmembrane protein carbonic anhydrase IX catalyzes the reversible hydration of carbon dioxide to carbonic acid, leading to a decrease in pH. Up-regulation of CA IX gene expression occurs in response to hypoxia via direct transcriptional activation by hypoxia inducible factor-1 alpha (HIF-1a), and is believed to be involved in sensing and maintaining the acidic environment of hypoxic cells, particularly within the hypoxic regions of tumors [1]. Using IHC and RT-PCR, elevated levels of CA IX protein have been detected in a variety of tumors, including those of the kidney, lung, colon, breast, liver, and pancreas [2–6]. In addition, 90% of all renal cell carcinoma are of the clear-

cell type, and of these, greater than 90% are positive for CA IX, suggesting CA IX may be a good biomarker for renal clear-cell adenocarcinoma [7].

Elevated levels of circulating CA IX have been detected in a variety of cancers, including metastatic breast cancer (MBC) [8–14]. Research studies using soluble CA IX as a potential biomarker had indicated increased circulating CA IX levels in the serum of MBC and lung cancer patients as well as in the plasma of colon, ovarian, and metastatic renal-cell cancers when compared to levels in healthy individuals [10, 11]. In some instances, elevated CA IX levels in serum sam-



ples from MBC patients were associated with shorter overall survival [11,12]. In other research, plasma levels of CA IX decreased after removal of the tumor in patients with localized clear-cell renal cancer [13]. Elevated CA IX serum levels in serum samples from ovarian cancer patients in that research were associated with poor progression-free survival [14].

The CA IX ELISA measures circulating levels of the CA IX oncoprotein and can be used as a research tool to determine the value of CA IX in serum and plasma. Additional research using the CA IX ELISA will help to better define the role of CA IX in cancer.

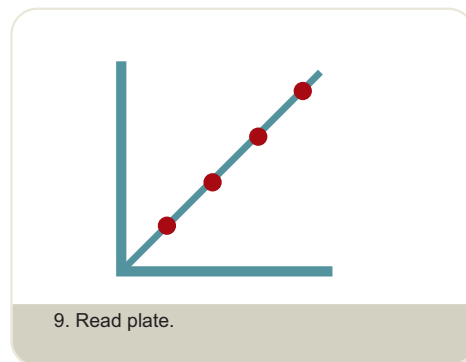
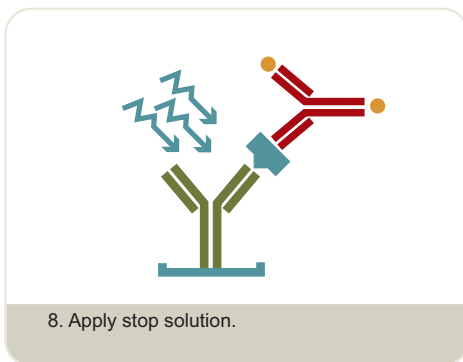
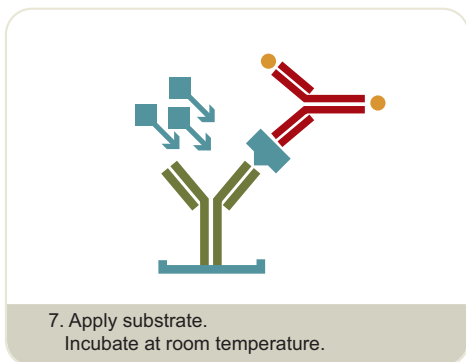
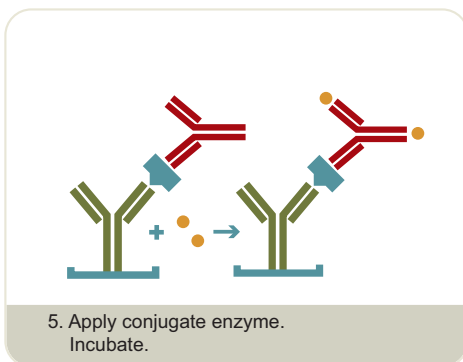
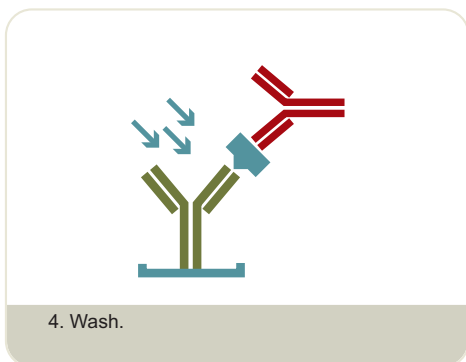
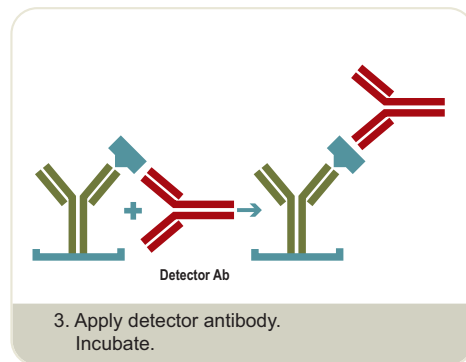
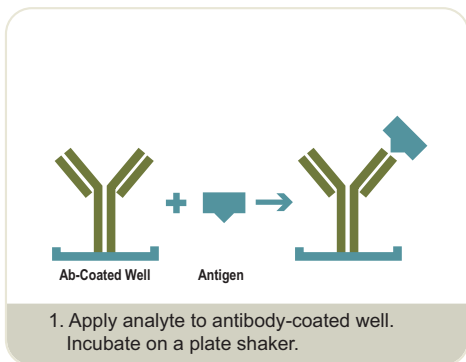
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*A study funded with Oncogene Science ELISA kits.

CA IX ELISA Procedure

Results are available in one day for researchers who require a standardized, reliable result for comparing values within the laboratory and between laboratories.



→ For additional product information or to place an order, please visit www.oncogene.com.

The CA IX ELISA also includes the following required materials to ensure accurate, consistently reproducible results:

- CA IX Standards
- Sample Diluent
- Detector Antibody
- Conjugate Diluent
- Conjugate Concentrate
- Substrate Solution
- Stop Solution
- Platewash Concentrate
- Microtiter Plate

Ordering Information

Part Number	Description			
06490025	CA IX ELISA (RUO)*	1 Plate	96 Wells	38 Samples†
06490033	CA IX ELISA Controls (RUO)*		1 mL	3 Levels

Each plate contains 96 antibody-coated test wells (12 strips of 8).

*Purchase of this kit licenses its use under the following U.S. patents: 5,387,676; 5,981,711; and 6,004,535

†Tests to be run in duplicate.

