



## Carbonic Anhydrase IX antibody [GT12]

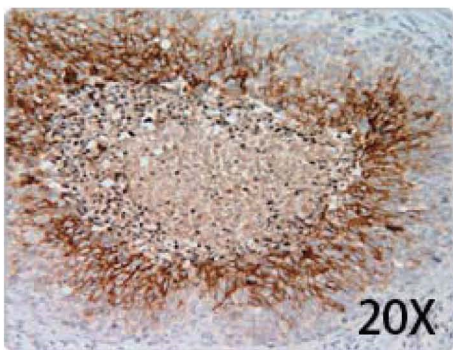
### A Hypoxia and Tumor Biomarker

Carbonic anhydrase IX, or CAIX, is a transmembrane protein that belongs to the 15 member carbonic anhydrase enzyme family and is involved in regulating cellular pH. CAIX expression is restricted to very few normal tissues, in particular the membranes of gastric mucosal epithelial cells. Under hypoxic conditions, hypoxia inducible factor-1 alpha (HIF-1a) is stabilized and the transcription factor HIF-1 transactivates the CA9 gene, resulting in expression of the CAIX protein in the hypoxic cells.

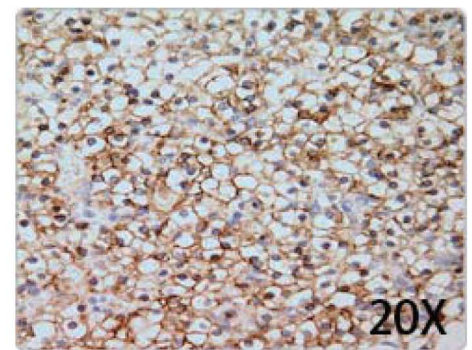
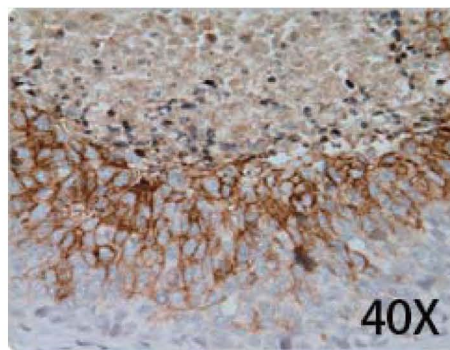
Due to its stability, cell surface transmembrane localization and rapid increase in protein level in response to HIF-1 alpha accumulation, CAIX is an excellent biomarker of hypoxic regions in many solid tumors. CAIX has been considered one of the best cellular biomarkers of hypoxia, and recent studies have suggested that CAIX expression may be a valuable prognostic indicator for overall survival.

CA IX Antibody [GT12]	
Product	CA IX antibody [GT12]
Cat. No.	GTX70020
Clonality	Mouse Monoclonal
Clone	GT12
Reactivity	Human
Applications	WB, ICC/IF, IHC, IP, FACS

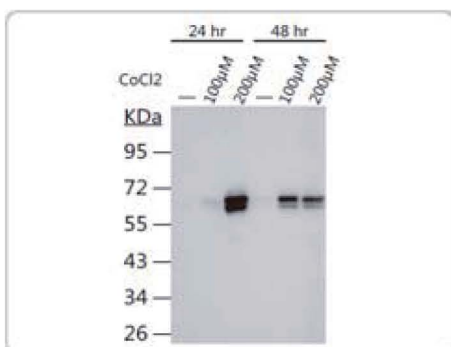
### Validated through multiple applications including IHC, WB, ICC/IF and FACS



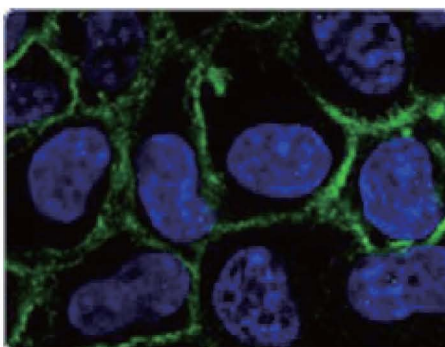
Expression of CAIX protein in human cervical cancer tissue as detected by anti-CAIX antibody [GT12].



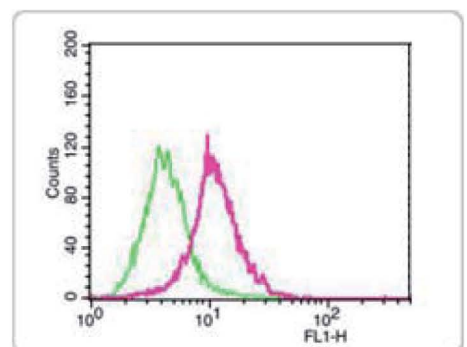
Detection of CAIX protein expression by anti-CAIX antibody [GT12] in human renal cell carcinoma, clear cell type.



Western blot analysis of CAIX protein expression in HeLa cells treated with  $\text{CoCl}_2$ .



Detection of CAIX protein (green) on cell membrane by anti-CAIX antibody [GT12] in methanol-fixed A431 cells treated with 200  $\mu\text{M}$   $\text{CoCl}_2$  for 48 hr. DAPI counterstain presented in blue.



FACS analysis of CAIX expression in 200  $\mu\text{M}$   $\text{CoCl}_2$ -treated HeLa cells (pink) using anti-CAIX antibody [GT12], untreated cells presented in green.

A dilution of 1:2,000 was used for all images.