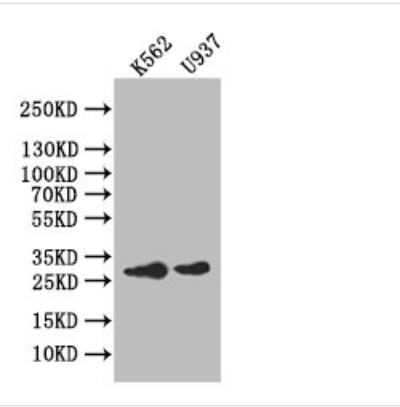
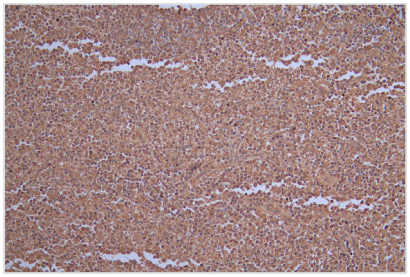
CA1 Recombinant Monoclonal Antibody

Product Code	CSB-RA217389A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P00915
Immunogen	A synthesized peptide derived from Human CA1
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, FC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200, FC:1:50-1:200
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular?Cell biology
Gene Names	CA1
Clone No.	26E3

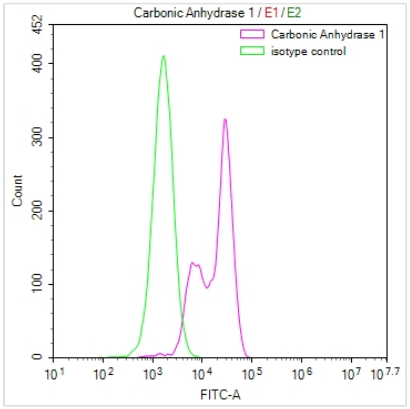
Image



Western Blot
Positive WB detected in: K562 whole cell lysate,U937 whole cell lysate
All lanes: Ikaros antibody at 1:1000
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 28 kDa
Observed band size: 28 kDa



IHC image of CSB-RA217389A0HU diluted at 1:50 and staining in paraffin-embedded human spleen tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.36% DAB.



Overlay Peak curve showing MCF-7 cells stained with CSB-RA217389A0HU (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1µg/1*10^6cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1µg/1*10^6cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The synthesis of the CA1 recombinant monoclonal antibody involves a carefully structured process. It all starts with in vitro cloning, where genes encoding both CA1 antibody's heavy and light chains are seamlessly integrated into expression vectors. Following this, these expression vectors are introduced into host cells, allowing for the recombinant antibody's expression within a cell culture environment. After expression, the CA1 recombinant monoclonal antibody is meticulously purified from the supernatant of transfected host cell lines, utilizing an affinity-chromatography purification method. An outstanding feature of this antibody is its specific reactivity with the human CA1 protein. Additionally, its versatility is highlighted, as it is suitable for a diverse range of applications, including ELISA, WB, IHC, and FC.

Carbonic anhydrase 1 (CA1) mainly catalyzes the reversible conversion of carbon dioxide (CO_2) and water (H_2O) into bicarbonate ions ($HCO3^-$) and protons (H_+). It is crucial for maintaining the body's acid-base balance, facilitating gas transport, and supporting various physiological processes related to pH regulation and metabolism.