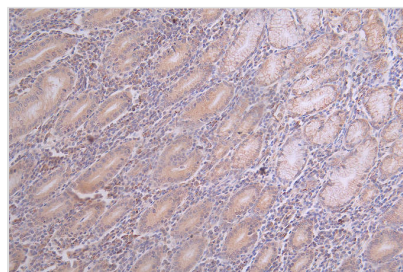




Acetyl-SOD2 (K68) Recombinant Monoclonal Antibody

Product Code	CSB-RA782732A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P04179
Immunogen	A synthesized peptide derived from Human SOD2
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC: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	Neuroscience?Cancer?Cardiovascular?Cell biology;Metabolism;Signal transduction
Gene Names	SOD2
Clone No.	23G5

Image



IHC image of CSB-RA782732A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica Bond™ 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 0.69% DAB.

Description

To create a recombinant monoclonal antibody against SOD2 acetylated at K68, CUSABIO's approach began with the immunization of a rabbit using a synthesized peptide derived from human SOD2 protein. Subsequent steps involved isolating B cells from the immunized rabbit and extracting RNA from these cells. The extracted RNA was reverse-transcribed into cDNA, which was



utilized as a template for extending SOD2 antibody genes using degenerate primers. These extended SOD2 antibody genes were integrated into a plasmid vector and introduced into host cells for expression. The acetyl-SOD2 (K68) recombinant monoclonal antibody was purified from the cell culture supernatant through affinity chromatography and evaluated for its utility in ELISA and IHC applications. It only reacts with human SOD2 protein acetylated at K68.

SOD2 is an enzyme responsible for scavenging superoxide radicals within the mitochondria, thereby protecting cells from oxidative damage. The acetylation of SOD2 at K68 is known to regulate enzymatic activity, protect against oxidative stress, as well as participate in mitochondrial function and cellular signaling.