

## Basic Information

<b>Product Name</b>	Anti-Aconitase 2/ACO2 Antibody (Clone#4C12D1)	
<b>Gene Name</b>	ACO2	
<b>Source</b>	Mouse	
<b>Clonality</b>	Monoclonal	
<b>Isotype</b>	IgG1	
<b>Species Reactivity</b>	human, mouse, rat	
<b>Tested Application</b>	WB, IHC	
<b>Contents</b>	500 ug/ml antibody with PBS, 0.02% NaN <sub>3</sub> , 1 mg/ml BSA and 50% glycerol.	
<b>Immunogen</b>	A synthetic peptide corresponding to a sequence at the C-terminus of human Aconitase 2, identical to the related mouse and rat sequences.	
<b>Concentration</b>	500 ug/ml	
<b>Purification</b>	Immunogen affinity purified.	
<b>Observed MW</b>	85 kDa	
<b>Dilution Ratios</b>	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer, pH6.0, or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

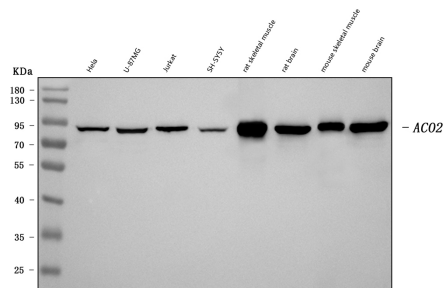
## Storage

12 months from date of receipt, -20°C as supplied.

## Background Information

Aconitase 2, mitochondrial is a protein that in humans is encoded by the ACO2 gene. The protein encoded by this gene belongs to the aconitase/IPM isomerase family. It is an enzyme that catalyzes the interconversion of citrate to isocitrate via cis-aconitate in the second step of the TCA cycle. This protein is encoded in the nucleus and functions in the mitochondrion. It was found to be one of the mitochondrial matrix proteins that are preferentially degraded by the serine protease 15 (PRSS15), also known as Lon protease, after oxidative modification.

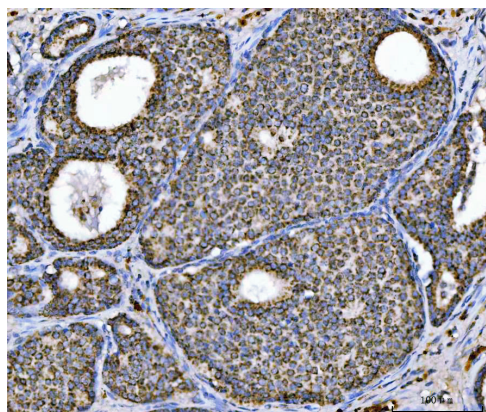
## Selected Validation Data



Western blot analysis of Aconitase 2/ACO2 using anti-Aconitase 2/ACO2 antibody (M03096-3). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.

Lane 1: Hela whole cell lysates,  
Lane 2: U-87MG whole cell lysates,  
Lane 3: Jurkat whole cell lysates,  
Lane 4: SH-SY5Y whole cell lysates,  
Lane 5: rat skeletal muscle tissue lysates,  
Lane 6: rat brain tissue lysates,  
Lane 7: mouse skeletal muscle tissue lysates,  
Lane 8: mouse brain tissue lysates.

After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with mouse anti-Aconitase 2/ACO2 antigen affinity purified monoclonal antibody (M03096-3) at a dilution of 1:1000 and probed with a goat anti-mouse IgG-HRP secondary antibody (Catalog # BA1050). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for Aconitase 2/ACO2 at approximately 85 kDa. The expected band size for Aconitase 2/ACO2 is at 85 kDa.



IHC analysis of Aconitase 2/ACO2 using anti-Aconitase 2/ACO2 antibody (M03096-3).

Aconitase 2/ACO2 was detected in a paraffin-embedded section of human breast cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was incubated with mouse anti-Aconitase 2/ACO2 Antibody (M03096-3) at a dilution of 1:200 and developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB (Catalog # AR1027) as the chromogen.