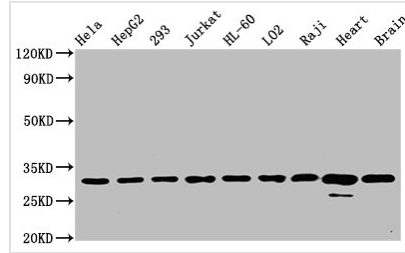




VDAC1 Antibody

Product Code	CSB-RA025821A0HU
Abbreviation	Voltage-dependent anion-selective channel protein 1
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P21796
Immunogen	A synthesized peptide derived from human VDAC1
Species Reactivity	Human, Mouse, Rat
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	Forms a channel through the mitochondrial outer membrane and also the plasma membrane. The channel at the outer mitochondrial membrane allows diffusion of small hydrophilic molecules; in the plasma membrane it is involved in cell volume regulation and apoptosis. It adopts an open conformation at low or zero membrane potential and a closed conformation at potentials above 30-40 mV. The open state has a weak anion selectivity whereas the closed state is cation-selective (PubMed:11845315, PubMed:18755977, PubMed:20230784, PubMed:8420959). May participate in the formation of the permeability transition pore complex (PTPC) responsible for the release of mitochondrial products that triggers apoptosis (PubMed:15033708, PubMed:25296756).
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
Alias	Voltage-dependent anion-selective channel protein 1, VDAC-1, hVDAC1, Outer mitochondrial membrane protein porin 1, Plasmalemmal porin, Porin 31HL, Porin 31HM, VDAC1, VDAC
Immunogen Species	Homo sapiens (Human)
Research Area	Tags & Cell Markers
Gene Names	VDAC1
Accession NO.	3A1
Image	


Western Blot

Positive WB detected in: Hela whole cell lysate, HepG2 whole cell lysate, 293 whole cell lysate, Jurkat whole cell lysate, HL-60 whole cell lysate, LO2 whole cell lysate, Raji whole cell lysate, Rat heart tissue, Mouse brain tissue

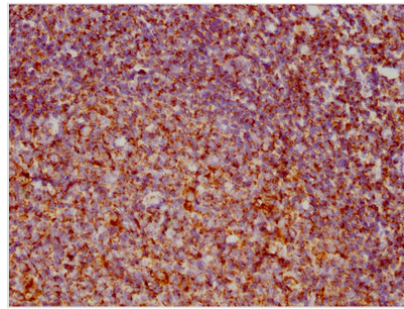
All lanes: VDAC1 antibody at 0.7μg/ml

Secondary

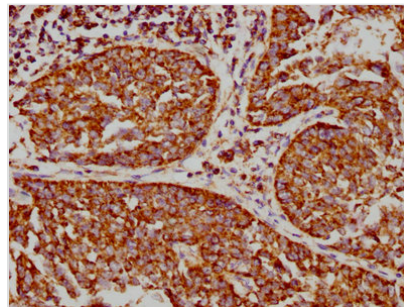
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 31 KDa

Observed band size: 31 KDa



IHC image of CSB-RA025821A0HU diluted at 1:73.125 and staining in paraffin-embedded human tonsil 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 biotinylated secondary antibody and visualized using an HRP conjugated SP system.



IHC image of CSB-RA025821A0HU diluted at 1:73.125 and staining in paraffin-embedded human cervical cancer 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 biotinylated secondary antibody and visualized using an HRP conjugated SP system.

Description

The VDAC1 antibody is a recombinant monoclonal antibody that can recognize the VDAC1 protein of human-, mouse-, and rat-origin. It is produced through the cloning of the human VDAC1 DNA gene into the vector and subsequent transfection of the clones into the cell line for in vitro expression. It has undergone affinity-chromatography purification and been validated by ELISA, WB, and IHC.

VDAC1, the most abundant protein on the outer membrane of mitochondria, is the gatekeeper for the passages of metabolites, nucleotides, and ions. It plays a crucial role in regulating apoptosis due to its interaction with apoptotic and anti-apoptotic proteins. Therefore, modulation of VDAC1 is crucial not only for metabolic functions of mitochondria but also for cell survival.