Product Data Sheet: OPA1

Cat. No:	MAB-94629
Conjugate:	Unconjugated
Size:	100 ug
Clone:	1E8-1D9
Concentration:	1mg/ml
Host:	Rb
Isotype:	IgG
Immunogen:	A synthetic peptide corresponding to a sequence at the C-terminus of human OPA1 (919-955aa EDGEKKIKLLTGKRVQLAEDLKKVREIQEKLDAFIEA), different from the related mouse and rat sequences by one amino acid.
Reactivity:	Hu, Ms, Rt
Applications:	Western Blot: 0.2-1 ug/ml Immunohistochemistry(Paraffin-embedded Section) 1-2 ug/ml Immunohistochemistry(Frozen Section): 1-2 ug/ml Immunocytochemistry: 4ug/ml Immunofluorescence: 4ug/ml Flow Cytometry: 2-6 ug/1×106 cells
Molecular Weight:	80-100kDa
Purification:	Immunogen affinity purified.
Background:	Dynamin-like 120 kDa protein, mitochondrial is a protein that in humans is encoded by the OPA1 gene. It is mapped to 3q29. This protein regulates mitochondrial fusion and cristae structure in the inner mitochondrial membrane (IMM) and contributes to ATP synthesis and apoptosis. This gene product is a nuclear-encoded mitochondrial protein with similarity to dynamin-related GTPases. It is a component of the mitochondrial network. Mutations in this gene have been associated with optic atrophy type 1, which is a dominantly inherited optic neuropathy resulting in progressive loss of visual acuity, leading in many cases to legal blindness. Multiple transcript variants encoding different isoforms have been found for this gene.
Form:	Liquid
Buffer:	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage:	At -20°C for one year. After reconstitution, at 4°C for one month. It can also be aliquoted and stored frozen at -20°C for a longer time. Avoid repeated freezing and thawing.

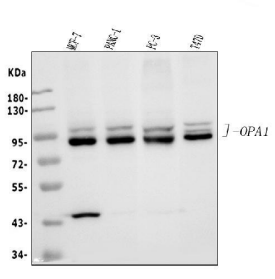
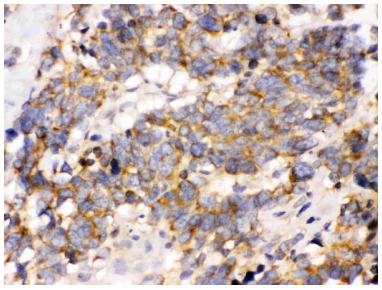
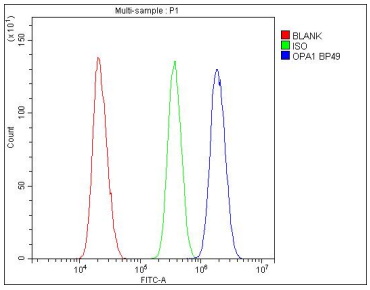


Figure 1. Western blot analysis of OPA1

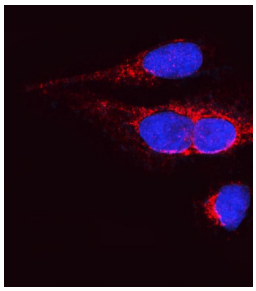


Anti- OPA1 Picoband antibody, IHC(P)



Flow Cytometry analysis of U20S cells

using anti-OPA1 antibody Electrophoresis was performed on a 5-20% SDS-PAGE gel at70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30ug of sample under reducing conditions. Lane 1: human MCF-7 whole cell lysates, Lane 2: human PANC-1 whole cell lysates, Lane 3: human PC-3 whole cell lysates, Lane 4: human T47D whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- OPA1 antigen affinity purified monoclonal antibodyat 0.5 mug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for OPA1 at approximately 80-100KD. The expected band size for OPA1 is at 80-100KD.



IF analysis of OPA1 using anti- OPA1 antibodyOPA1 was detected in immunocytochemical section of U20S cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2mug/mL rabbit anti-OPA1 Antibody overnight at 4°C. DyLight®594 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for thelabel used.

IHC(P): Human Lung Cancer Tissue

using anti-OPA1 antibody. Overlay histogram showing U20S cells stained with (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti- OPA1 Antibody (,1mug/1×106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG(1mug/1×106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.