For Research Use Only

OPA1 Polyclonal antibody

Catalog Number:27733-1-AP Featured Product 109 Publications

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Basic Information

Catalog Number:
27733-1-AP

Size:
150ul , Concentration: 500 μg/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG26887

GenBank Accession Number:
BC075805

GeneID (NCBI):
4976

UNIPROT ID:
O60313

Full Name:
optic atrophy 1 (autosomal dominant)

Calculated MW:
960 aa, 112 kDa

Observed MW:
100 kDa, 80-90 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:1000-1:4000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500

Applications

Tested Applications:
IHC, IP, WB, ELISA

Cited Applications:
WB,IHC,IF,CoIP

Species Specificity:
Human, rat, mouse

Cited Species:
human, goat, Chicken, rat, mouse, zebrafish, hamster, pig, duck, bovine

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : A431 cells, mouse brain tissue, HEK-293 cells, rat brain tissue, HEK-293T cells, HeLa cells, mouse liver tissue, HepG2 cells

IP : mouse brain tissue,

IHC : mouse heart tissue, mouse brain tissue

Background Information

OPA1 is a nuclear-encoded mitochondrial protein with similarity to dynamin-related GTPases. OPA1 localizes to the inner mitochondrial membrane and helps regulate mitochondrial stability and energy output. This protein also sequesters cytochrome c. OPA1 is associated with the inner membrane and protects cells from apoptosis by regulating inner membrane dynamics. Mutation of OPA1 causes the disease dominant optic atrophy, a degeneration of the retinal ganglion cells. OPA1 undergoes complex posttranscriptional regulation and posttranslational proteolysis. OPA1 is regulated by proteolytic cleavage, which degrades long OPA1 isoforms into short isoforms. The gene OPA1 can be cleaved into some chains with MW 100 kDa and 80-90 kDa.

Notable Publications

Author	Pubmed ID	Journal	Application
Rocío García-Arroyo	36232896	Int J Mol Sci	WB
Q E Xie	34571250	Mitochondrion	WB
Siwen Li	28957766	Chemosphere	WB

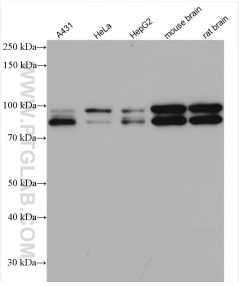
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

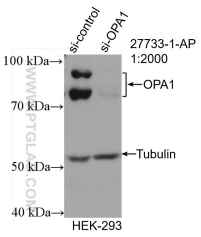
*** 20ul sizes contain 0.1% BSA

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

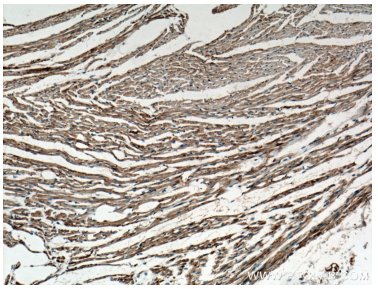
Selected Validation Data



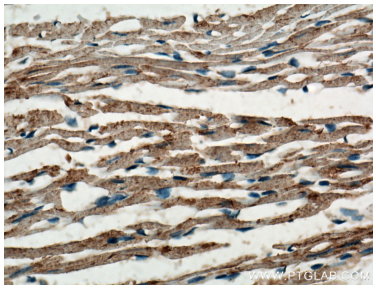
Various lysates were subjected to SDS PAGE followed by western blot with 27733-1-AP (OPA1 antibody) at dilution of 1:2000 incubated at room temperature for 1.5 hours.



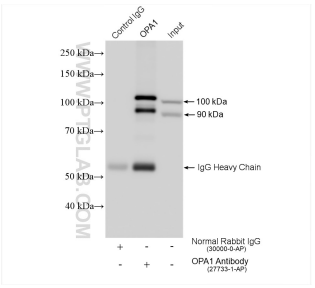
WB result of OPA1 antibody (27733-1-AP; 1:2000; incubated at room temperature for 1.5 hours) with sh-Control and sh-OPA1 transfected HEK-293 cells.



Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using 27733-1-AP (OPA1 antibody) at dilution of 1:200 (under 10x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse heart tissue slide using 27733-1-AP (OPA1 antibody) at dilution of 1:200 (under 40x lens. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



IP result of anti-OPA1 (IP:27733-1-AP, 4ug; Detection:27733-1-AP 1:10000) with mouse brain tissue lysate 1280 ug.