

For Research Use Only

# OPA1 Monoclonal antibody

Catalog Number: 66583-1-Ig

Featured Product

21 Publications



## Basic Information

Catalog Number:

66583-1-Ig

Size:

150ul, Concentration: 2000 ug/ml by Nanodrop;

Source:

Mouse

Isotype:

IgG2b

Immunogen Catalog Number:

AG26868

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 and 80-90 kDa

Purification Method:

Protein A purification

CloneNo.:

1B2D8

Recommended Dilutions:

WB 1:500-1:2000

IHC 1:400-1:1600

## Applications

Tested Applications:

WB, IHC, ELISA

Cited Applications:

WB, IF

Species Specificity:

Human, mouse, pig, rat

Cited Species:

human, mouse, rat, fish

**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 : HEK-293 cells, pig brain tissue, HeLa cells, HepG2 cells, Y79 cells, mouse brain tissue, rat brain tissue

IHC : 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 |
|----------------|-----------|-------------------------------------|-------------|
| Xiao-Lin Jiang | 36309912  | Aging (Albany NY)                   | WB          |
| Jia Xu         | 36269134  | Acta Biochim Biophys Sin (Shanghai) | WB          |
| Xiaowei Xiong  | 36283451  | Eur J Pharmacol                     | WB          |

## Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol, pH7.3

Aliquoting is unnecessary for -20°C storage

\*\*\* 20ul sizes contain 0.1% BSA

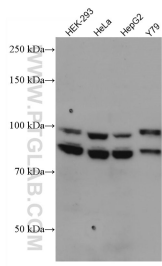
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

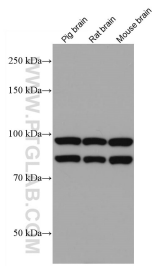
E: proteintech@ptglab.com  
W: ptglab.com

This product is exclusively available under Proteintech Group brand and is not available to purchase from any other manufacturer.

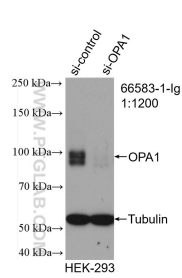
Selected Validation Data



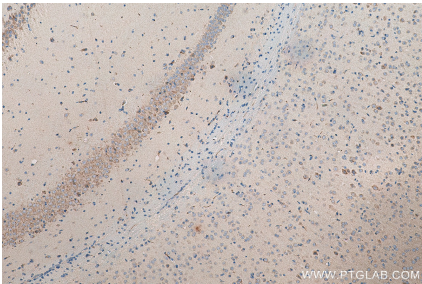
Various lysates were subjected to SDS PAGE followed by western blot with 66583-1-Ig (OPA1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



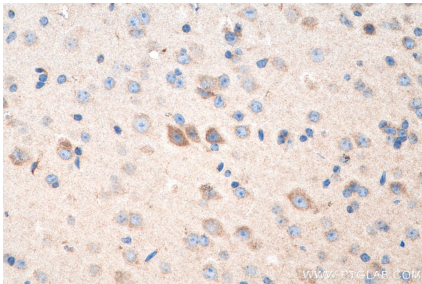
Various lysates were subjected to SDS PAGE followed by western blot with 66583-1-Ig (OPA1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



WB result of OPA1 antibody (66583-1-Ig; 1:1200; incubated at room temperature for 1.5 hours) with sh-Control and sh-OPA1 transfected HEK-293 cells.



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 66583-1-Ig (OPA1 antibody) at dilution of 1:800 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 66583-1-Ig (OPA1 antibody) at dilution of 1:800 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).