

For Research Use Only

# OPA1 Monoclonal antibody

Catalog Number: 66583-1-Ig

Featured Product

13 Publications



## Basic Information

<b>Catalog Number:</b> 66583-1-Ig	<b>GenBank Accession Number:</b> BC075805	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 150ul, Concentration: 2100 µg/ml by Nanodrop and 1000 µg/ml by Bradford method using BSA as the standard;	<b>GeneID (NCBI):</b> 4976	<b>CloneNo.:</b> 1B2D8
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> O60313	<b>Recommended Dilutions:</b> WB 1:500-1:2000 IHC 1:400-1:1600
<b>Isotype:</b> IgG2b	<b>Full Name:</b> optic atrophy 1 (autosomal dominant)	
<b>Immunogen Catalog Number:</b> AG26868	<b>Calculated MW:</b> 960 aa, 112 kDa	
	<b>Observed MW:</b> 100 kDa and 80-90 kDa	

## Applications

**Tested Applications:**  
WB, IHC, ELISA

**Cited Applications:**  
WB, IF

**Species Specificity:**  
Human, mouse, pig, rat

**Cited Species:**  
human, rat, mouse, 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 pH 7.3.

Aliquoting is unnecessary for -20°C storage

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

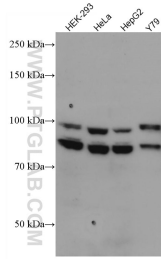
For technical support and original validation data for this product please contact:

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

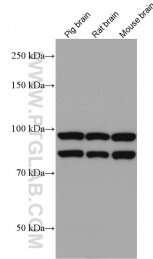
E: proteintech@ptglab.com  
W: ptglab.com

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

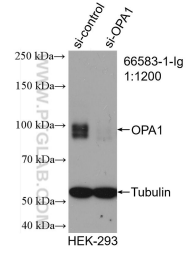
## Selected Validation Data



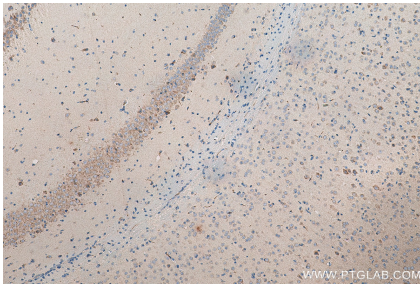
Various lysates were subjected to SDS PAGE followed by western blot with 66583-1-Ig (OPA1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



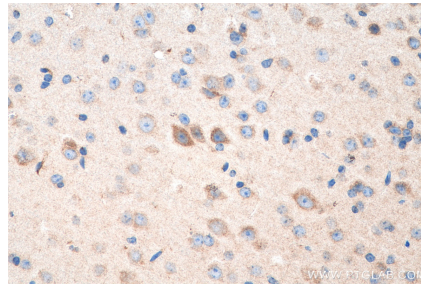
Various lysates were subjected to SDS PAGE followed by western blot with 66583-1-Ig (OPA1 antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



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).