Datasheet for ABIN968892

# anti-OPA1 antibody (AA 708-830)

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## Overview

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| Quantity: | 150 µg |
| Target: | OPA1 |
| Binding Specificity: | AA 708-830 |
| Reactivity: | Human, Mouse, Rat, Chicken, Dog |
| Host: | Mouse |
| Clonality: | Monoclonal |
| Conjugate: | This OPA1 antibody is un-conjugated |
| Application: | Western Blotting (WB), Immunofluorescence (IF) |

## Product Details

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| Immunogen: | Human OPA1 aa. 708-830 |
| Clone: | 18-OPA1 |
| Isotype: | IgG1 |
| Cross-Reactivity: | Dog (Canine), Rat (Rattus), Mouse (Murine), Chicken |
| Characteristics: | 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.<br>2. Please refer to us for technical protocols.<br>3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.<br>4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. |
| Purification: | The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity |

## Product Details

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| | chromatography. |

## Target Details

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| Target: | OPA1 |
| Alternative Name: | OPA1 (OPA1 Products) |
| Background: | Three major GTP-binding protein families include trimeric and low molecular weight G-proteins, as well as a family of large proteins homologous to dynamin. The dynamin family contains proteins with diverse structure and function, but highly homologous N-terminal GTPase domains. A subgroup of the dynamin G-protein-binding family includes the mitochondrial proteins Drp1/Dnm1, Mgm1, and OPA1. The latter protein is mutated in dominant optic atrophy, a disease that involves loss of visual acuity and atrophy of the optic nerve. OPA1 is expressed in heart, brain, liver, and kidney. The sequence of OPA1 includes an N-terminal region that contains a mitochondrial targeting domain and three GTP-binding motifs. The overexpression of OPA1 in Cos-7 cells shows co-localization with cytochrome c in mitochondria, and leads to alterations in mitochondrial morphology from a characteristic tubuluar shape to a vesicular pattern. Thus, OPA1 may have roles in mitochondrial biogenesis that are critical for normal cell function. This antibody is routinely tested by western blot analysis. |
| Molecular Weight: | 80-100 kDa |
| Pathways: | Tube Formation |

## Application Details

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| Comment: | Related Products: ABIN968586, ABIN967389 |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Concentration: | 250 µg/mL |
| Buffer: | Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide. |
| Preservative: | Sodium azide |
| Precaution of Use: | This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only. |

## Handling

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| Storage: | -20 °C |
| Storage Comment: | Store undiluted at -20° C. |

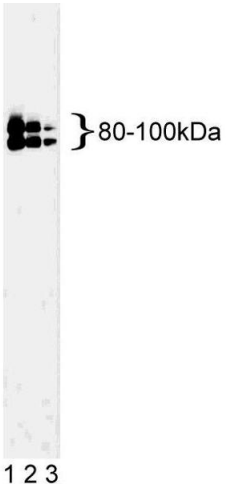
## Publications

Product cited in:

Alexander, Votruba, Pesch, Thiselton, Mayer, Moore, Rodriguez, Kellner, Leo-Kottler, Auburger, Bhattacharya, Wissinger: "OPA1, encoding a dynamin-related GTPase, is mutated in autosomal dominant optic atrophy linked to chromosome 3q28." in: **Nature genetics**, Vol. 26, Issue 2, pp. 211-5, (2000) (PubMed).

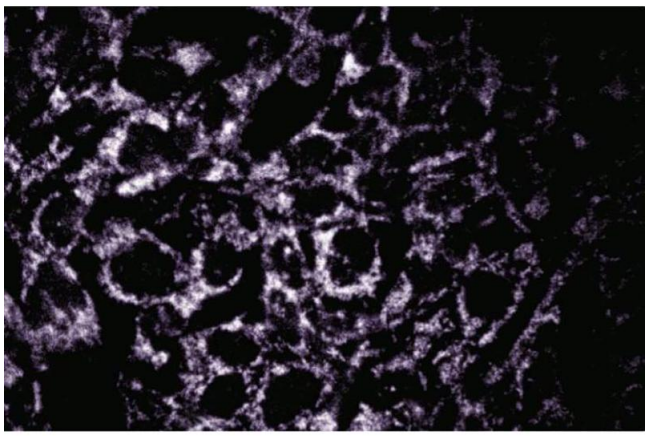
Delettre, Lenaers, Griffoin, Gigarel, Lorenzo, Belenguer, Pelloquin, Grosgeorge, Turc-Carel, Perret, Astarie-Dequeker, Lasquellec, Arnaud, Ducommun, Kaplan, Hamel: "Nuclear gene OPA1, encoding a mitochondrial dynamin-related protein, is mutated in dominant optic atrophy." in: **Nature genetics**, Vol. 26, Issue 2, pp. 207-10, (2000) (PubMed).

## Images




**Western Blotting**

**Image 1.** Western blot analysis of OPA1 on a K-562 cell lysate (Human bone marrow myelogenous leukemia, ATCC CCL-243). Lane 1: 1:500, lane 2: 1000, lane 3: 1: 2000 dilution of the mouse anti- OPA1 antibody.



**Immunofluorescence**

**Image 2.** Immunofluorescence staining of COS-7 cells (African Green Monkey SV40 transformed kidney cells, ATCC CRL-1651).